



SKOMER MARINE NATURE RESERVE REPORT 2004

**CCW Regional Report
Report CCW/WW/04/4**



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SKOMER MARINE NATURE RESERVE

REPORT 2004

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SYNOPSIS

This is the Skomer Marine Nature Reserve Annual Report to its Advisory Committee. The Advisory Committee is made up of organisations and individuals with an interest in the area covered by the MNR.

The report summarises all aspects of the work of the MNR including a breakdown of staff fieldwork time, estate work, recreational use of the reserve, incidents, liaison, wardening, patrol, monitoring and research. Also included are results of some monitoring projects and summaries of published reports.

CRYNODEB

Dyma Adroddiad Blynyddol Gwarchodfa Natur Forol Sgomer (GNFS) i'w Phwyllgor Ymgynghorol. Mae'r Pwyllgor Ymgynghorol yn cynnwys sefydliadau ac unigolion sydd â diddordeb yn yr ardal y mae GNFS yn ymdrin â hi.

Fe fydd yr adroddiad yn crynhoi pob agwedd ar waith GNFS, gan gynnwys dadansoddiad o amser gwaith maes y staff, gwaith stad, y defnydd a wneir o'r warchodfa wrth hamddena, digwyddiadau, gwaith cydgysylltu, wardenio, patrolio, monitro a gwaith ymchwil. Hefyd, mae canlyniadau rhai prosiectau monitro a rhai o grynnodebau adroddiadau sydd wedi eu cyhoeddi, wedi eu cynnwys yma.

1 INTRODUCTION AND FOREWORD

This report covers the period 1 April 2004 to 31 March 2005, in line with other reporting requirements within CCW.

Despite an admittedly ambitious monitoring and fieldwork programme the MNR team has managed to deliver the goods. All planned monitoring fieldwork been completed, or where projects have not gone ahead others have been brought forward instead.

In addition to this the MNR has continued to seek partnerships with other organisations to ensure that full benefit is derived from the data the MNR collects, rather than just its primary use as a monitoring tool. Long-term data has been used to test population models, to study life cycles of species where little knowledge existed and to guide the practical implementation of impending legislation such as the Water Framework Directive. This not only allows the MNR to satisfy the stated aim of the MNR legislation, which is to encourage and support learning and research, but also builds up a wealth of background knowledge to inform the management of the site.

On a more local basis MNR staff have tried to engage the interest of our younger generation with specific projects aimed at school children, namely the “Fun Day” and “Adopt a Seafan” projects. It is hoped to develop this in the coming year, but given the constraints of CCW’s budget, we are having to be more cunning about how we go about this. Current plans would involve the minimum of additional effort or cost by utilising and adapting products of our day-to-day work.

The volunteer diving support for the MNR goes from strength to strength, limited only by our availability to set up and manage projects for them.

The relationships we have built up with the local community and with users of the MNR have helped when drafting ideas for the proposed fishery byelaw. Input from a host of people has gone into the thought processes behind the byelaw and is acknowledged with gratitude.

As we go into 2005 it is with fingers crossed that the byelaw progresses in such a form as to give the MNR the extra protection that we seek.

Phil Newman

Skomer MNR Officer

2 STAFF

2.1 STAFFING

Skomer MNR now has four permanent staff, although two are part-time:

Phil Newman (PN) as Skomer MNR Officer, and Mark Burton (MB) as Assistant Marine Conservation Officer are full-time. Kate Lock (KL) as Assistant Marine Conservation Officer has remained part-time (three days per week) and Louise Luddington (LL) continues as our Seasonal Assistant Marine Conservation Officer for 6 months of the field season each year.

LL was able to provide maternity cover for KL over the winter and up until her own contract recommenced in May.

The MNR team was also supplemented, when their other duties allow, by local CCW staff; Blaise Bullimore (BB), who continues as Senior Marine Conservation Officer (West Wales) and is the professional lead within CCW for the MNR, and Mike Camplin, Marine Conservation Officer (West Wales).

Although somewhat reduced because of their other commitments valuable contributions have nonetheless been made to the work of the MNR by:

- Steve Myatt, Nick Jeremy and John Archer Thomson, who helped with voluntary diving assistance,
- Honorary Wardens, who continue to open the MNR exhibition when MNR staff are not at Martins Haven, and help in recording visitor numbers, disturbance incidents, infringements of MNR code of conduct and contribute to various aspects of species recording,
- Cathy Hopewell from Pembrokeshire College who recorded levels of disturbance to seals that used Deer Park beaches during the pupping season in 2004 and also made the first identification records of adult seals using the mainland beaches. The sketches, photographs and video recordings helped to extend the methodology that is used on Skomer Island to mainland breeding sites and to improve methods used throughout the MNR.
- The ever-increasing numbers of volunteer divers who carried out surveys of the MNR's scallop population (see section 7).

Volunteers form an important part of the resources available to the MNR and the annual volunteer diver survey projects have proved increasingly popular. Demand is such that two weekends each year are now organised by MNR staff. The penalty for these surveys is a lot of weekend work for MNR staff, which then has to be made up for during the normal working week. Fortunately MNR staff have been flexible enough to take required time off at times when weather prevents fieldwork or when volunteer divers are available to dive as part of the MNR team. This small number of individual volunteers has also grown, but their availability is conditional on their personal circumstances and other commitments and so is difficult to quantify when planning fieldwork.

2.2 HONORARY AND VOLUNTARY WARDENS

The following continue to serve as Honorary Wardens (HW):

- Lana Bullimore
- Sue Burton
- Nic Davies, skipper *Crowded Hour* (M1140)
- Brian Dilly, dive charter operator
- Kenny Gainfort, Skipper *Dale Princess*
- Jane Hodges, PCNP
- Ivor Johnson, Old Mill Diving Services
- Bruce Jones, BS-AC
- Steve Lewis, Pembrokeshire Dive Charters
- James Perrins
- Brian Martin and Lionel Jewell, Martin's Haven National Trust car park attendants.
- Carl Wonnacot, crew *Dale Princess*

2.3 TRAINING

PN attended first aid at work refresher courses in accordance with HSE diving requirements.

MNR staff attended CCW's annual monitoring seminar in Aberystwyth at which PN presented an update on the MNR's work.

MB and LL attended a two-day oil-spill training course organised by the MCA and PN and KL attended a one-day update.

2.4 HEALTH AND SAFETY

The MNR Safety Document continues to be kept updated: COSHH assessments and PPE assessments are added as necessary and PUWER assessments are being prepared for new and existing equipment.

Diving Project Plans, required under the HSC Agreed Code of Practice (ACoP) for Scientific and Archaeological Diving Projects continue to be prepared for each diving project.

One entry was made in the accident book when PN wrenched his back helping to manhandle the dinghy down Martin's Haven beach.

DSE assessments were carried out for Skomer MNR staff by staff from the West Region office. Changes to IT equipment have been made to comply.

3 ESTATE

3.1 BUILDINGS

Project: ME12/01 Staff time: Estimated: 4.5 Actual: 3.2

A barn rented from NT continues to be used for the storage of larger equipment and for maintenance of Skalmey II.

Project: MI50/01 Staff time: Estimated: 8.5 Actual: 3.7

The MNR exhibition at Martin's Haven was open from the end of March 2004 through to mid November.

No data on visitor numbers is available due to a break down in the break-the-beam counter system.

MNR staff have continued to keep the exhibition more current by preparing posters featuring aspects of the MNR's work of particular relevance to the year or season (see Chapter 8).

3.2 BOATS

Project: MM00/01 Staff time: Estimated: 43.0 Actual: 60.3

3.2.1 Boats

Skalmey went to sea 52 times and logged 171.07 engine hours. This reflects the significant amount of work needed to repair corrosion damage to the fuel tanks early in the season. The damage was only noticed during the boat's first outing of the season, following routine services for engine and gearbox.

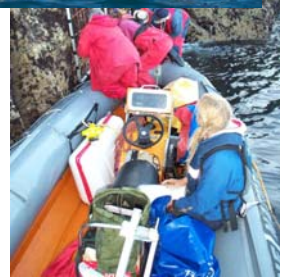


The sudden appearance of large volumes of red diesel in the bilges prompted swift action to locate the leaks and resulted in the engine being removed to enable removal of the fuel tanks.

Annual maintenance of *Skalmey's* life raft was carried out.



Skalmey II went to sea 40 times and logged 162.7 engine hours. She has



been used extensively during the intertidal survey as well as for normal patrol and seal monitoring duties.



Both boats underwent an annual inspection by a marine surveyor as required for the MCA Small Workboat Code.



Our poor old GRP dinghy still survives, although the weight of generations of patches to the hull have now made it a potential manual handling hazard. However, we do now have a nice shiny new set of oars!

3.2.2 Seatime

Staff and vessel seatime are shown in Table 3.1.

Staff days at sea = total of days on which each member of staff went out in a boat.

Staff seatime = total of each member of staff's seatime.

Boat days at sea = number of times the boat left its moorings.

Table 3.1 SUMMARY OF STAFF BOAT AND SEATIME

	1993	1994	1995	1996	1997*	1998 [#]	1999 [#]	2000 [#]	2001 [#]	2002 [#]	2003 [#]	2004 [#]
Days at sea												
Skalmey	112	18	68	90	19	9	23	42	48	73	77	52
Skalmey II	70	124	76	52	99	71	39	38	31	37	32	40
Total	182	140	144	142	118	80	62	80	79	110	109	92
MNR Staff seatime (hours)												
Skalmey	n/a	213.7	614.8	919.0	181.55	70	195	492.5	621.75	882.9	777.61	640.35
Skalmey II	n/a	1038.9	644.7	352.4	732.92	514.25	219	254.15	225.75	277.4	278.7	460.9
Total		1252.7	1259.6	1271.4	914.47	584.25	414	746.65	847.5	1160.3	1056.31	1101.25
MNR Staff days at sea												
Skalmey	293	43	156	223	51	14	42	96	129	225	205	154
Skalmey II	134	316	168	104	214	149	62	60	58	80	70	104
Total	427	359	324	327	265	163	104	156	187	305	275	254
Other Staff seatime (hours)												
Skalmey	n/a	n/a	n/a	n/a	n/a	n/a	n/a	273.75	197.25	204	88	76.7
Skalmey II	n/a	n/a	n/a	n/a	n/a	n/a	n/a	105.75	89	89.7	69	107.25
Total								379.5	286.25	293.7	157	183.95
Other Staff days at sea												
Skalmey	n/a	n/a	n/a	n/a	n/a	n/a	n/a	40	36	23	21	15
Skalmey II	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17	19	22	15	21
Total								57	55	45	36	36
Total Staff seatime (hours)												
Skalmey	n/a	n/a	n/a	n/a	n/a	n/a	n/a	766.25	819	1086.9	865.61	717.05
Skalmey II	n/a	n/a	n/a	n/a	n/a	n/a	n/a	360.25	314.75	367.1	347.7	568.15
Total								1126.5	1133.75	1454	1213.31	1285.2
Total Staff days at sea												
Skalmey	n/a	n/a	n/a	n/a	n/a	n/a	n/a	213	242	248	226	169
Skalmey II	n/a	n/a	n/a	n/a	n/a	n/a	n/a	77	77	102	85	125
Total								213	319	329	311	294

*1997 includes Jan - March 98

[#]Financial year April - End of March

MNR Staff = Philip Newman, Kate Lock, Mark Burton, Louise Luddington, Blaise Bullimore

Other Staff =, Mike Camplin, other CCW Staff and Volunteers

3.3 EQUIPMENT

Project: AII0/01 Staff time: Estimated: 0.5 Actual: 0.3

The Skomer MNR inventory has been kept updated, with any new purchases or disposals of equipment recorded.

3.3.1 Safety, diving and protective equipment

Project: MM20/01 Staff time: Estimated 2.5 Actual: 0.3

Skalmey's life raft had its annual inspection and a Solas-approved life raft continues to be hired for *Skalmey II*.

Lifejackets were inspected and inflation tested. Other personal protective equipment was maintained or purchased as required.

Project: MM20/02 Staff time: Estimated 18.0 Actual: 11.8

Regulators were all serviced and cylinders tested as per HSE requirements.

Other Skomer MNR diving equipment was maintained by MNR staff or by contractor. Diving cylinders continue to be filled by contractors as necessary. The MNR team continues to use Nitrox (oxygen-enriched air mixture) for much diving as this has significant benefits at the type of depths that most monitoring work is done, both in terms of dive duration and safety margins.

3.3.2 Optical, photographic and scientific

Project: MM20/03 Staff time: Estimated 8.5 Actual: 4.7

All cameras and flashguns were serviced and repaired by contractor during the winter. Although the Kodak digital camera has continued to be a great success for general photography and for intertidal work, it is limited in its close-up capability and so CCW's IT department have agreed to provide the MNR with a higher specification camera in 2005. Investigations into replacing the MNR's outdated Hi8 video camera have resulted in a number of alternatives to be considered in 2005.

Project: MM20/04 Staff time: Estimated 3.0 Actual: 0.2

Maintenance of Skomer MNR scientific instruments included recalibration of the salinity, depth, and temperature equipment.

Calibration of the Idronaut turbidity logger is now carried out as an ongoing project with water samples taken and filtered throughout the season (see Section 7).

Project: RP04/01 Staff time: Estimated 2.5 Actual: 0.8

A successful bid for funding to replace the automatic weather station was made for the 2005/6 season. It is intended to emulate CCW's Environmental Change Network weather station that is situated on Snowdon, to allow the MNR station to feed into the same network and to be able to display data on the same website.

3.4 ESTATE WORK

Project: ME01/01 Staff time: Estimated 1.75 Actual: 4.1

The North Haven eelgrass bed markers were deployed in 2004. Trinity House has approved the design of the buoys.

The top buoy marking the wreck of the "Lucy" was replaced, with a chain section adjacent to a new buoy. This is to reduce the risk of entanglement with boat propellers that is present with floating line.



Project: ME02/01 Staff time: Estimated 7.0 Actual: 4.4

Skomer MNR moorings in Martin's Haven were maintained. Riser chains on *Skalmey's* mooring were replaced in addition to the normal renewal of shackles at the start of the season. *Skalmey II's* riser chain was replaced and the mooring at Dale was also checked periodically. The use of more expensive tested shackles has reduced the frequency of replacement.

Project: ME02/02 Staff time: Estimated 3.0 Actual: 3.1

Visitor moorings in North Haven were maintained and have now been increased to four with the adoption of the former Dale Fort Field Studies Centre mooring. The mooring buoys were replaced with pellet buoys marked "No mooring" to avoid winter visitors using unmaintained moorings.



Project: ME02/03 Staff time: Estimated 4.0 Actual: 6.0

A new Skomer MNR monitoring site for seafans and Ross corals was established on the mainland part of the MNR off West Hook. Maintenance work was carried out on monitoring sites at North Neck, OMS, and Waybench. A suitable site for a second seabed frame has been identified at the Thorn Rock site. This will replace the shipwreck deck beams that were used to mount monitoring equipment until the beams broke up during the winter of 2003.

Site marking and preparation have been completed for the suite of littoral monitoring sites that were identified during 2003 (see section 7).

Project: ME04/01 Staff time: Estimated: 1.1 Actual: 1.1

Martins Haven beach continued to be cleaned as part of the Marine Conservation Society 'Adopt a Beach' project, although the regular visits by local authority beach care staff have left little for MNR staff to do!

Skomer MNR staff removed office rubbish and beach rubbish. Occasional litter encountered at sea was also recovered where it was considered a hazard to navigation.

3.5 DIVING OPERATIONS

Details of diving operations are shown in Table 3.2 and Figures 3.1 and 3.2.

MNR staff dives and diving time both increased in 2004 when Kate was able to rejoin the diving team in June following maternity leave. However, early in the season diving operations were restricted by Kate's absence and the unavailability of Skalmey (already mentioned in 3.2.1).

Volunteer dive times also increased as a larger pool of volunteers has developed.

Again the majority of diving was carried out for biological monitoring projects.

FIGURE 3.1 SUMMARY OF MNR DIVING ACTIVITY 1992-2004

(Including contract and volunteer divers where they are part of the MNR diving team)

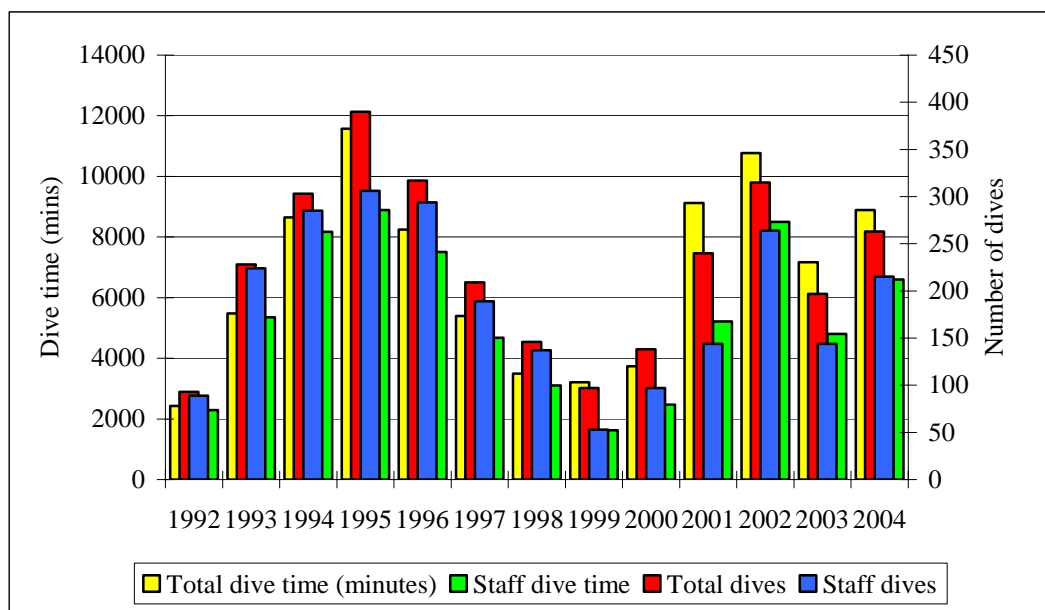
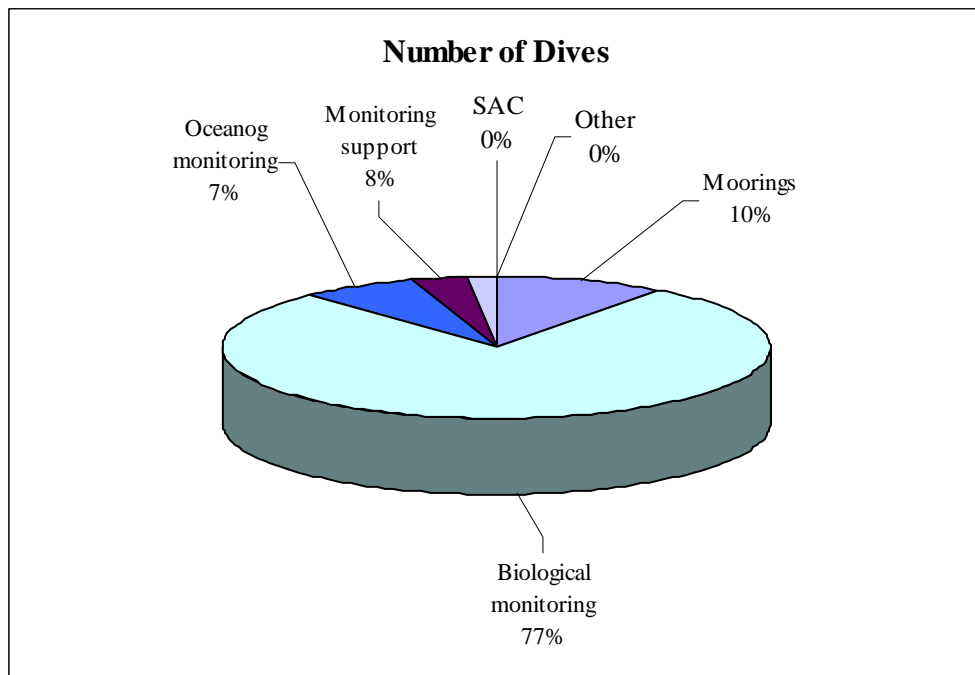
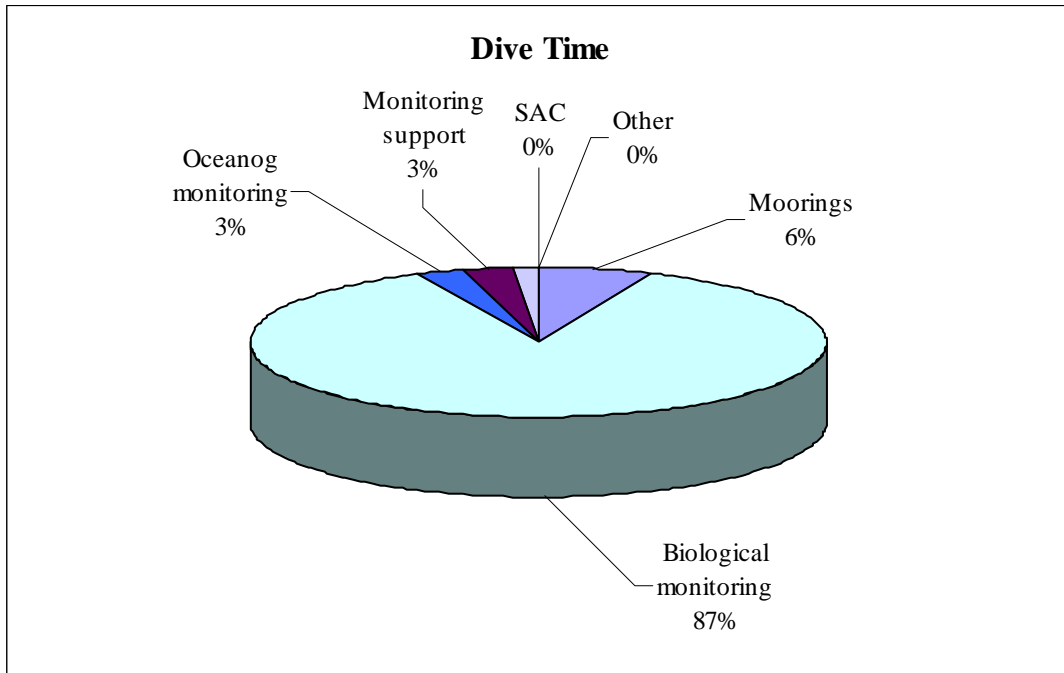


TABLE 3.2 SUMMARY OF DIVING ACTIVITY 2004

	MNR STAFF	CONTRACT & VOL DIVERS	TOTAL
Dives	215	48	263
Dive time (min)	6597	2294	8891
Dive time (hrs)	109.95	38.23	148.18
Average dive time (mins)	31	48	33.81
Diving days			45

FIGURE 3.2 MNR DIVING OPERATIONS 2004

(Including contract and volunteer divers where they are part of the MNR diving team)



4 MANAGEMENT

4.1 WARDENING AND PATROL

Project: MP00/01 Staff time: Estimated 25.0 Actual: 17.7

Site patrol at Skomer MNR was carried out on 23 days, concentrating on Sundays and Bank Holidays between May and September. A watching brief was maintained at other times when staff were out on the water.

Sea time statistics were 258 staff days and 92 boat days (See Table 3.1). Although the number of times MNR staff and boats went to sea is lower, the amount of time spent at sea is higher than in 2003.

Data for all observed visitors and use of the MNR from April 2003 to April 2004 is shown in Section 5.



4.2 INFORMATION

Project: AS00/01 Staff time: Estimated 1.0 Actual: 14.5

Demand for the MNR interpretative booklet "Stars, squirts and slugs...marine life in an underwater refuge" has decreased somewhat and it is thought that the reprint of 5000 copies delivered in 2004 should be sufficient for the 2005 season. A custom built dispenser has been acquired to store and dispense booklets in the MNR exhibition.

See Section 8 for other interpretative material and for other examples of the MNR in the news.

The proposed reprint of the MNR 'User Regulations' leaflet with amendments to the CCW logo and the inclusion of areas of particular sensitivity for cetaceans has been postponed pending developments with the proposed fishery byelaw. The reprint could then incorporate all necessary changes.

Stocks of the diving safety information leaflet produced for the MNR by Pembrokeshire County Council should be sufficient for the 2005 season.

Leaflets have been available via the MNR office, West Wales Divers, Old Mill Diving Services, local yacht clubs and marinas, local dive charters and schools, and South Wales Sea Fisheries Committee.

A laminated version of the MNR zonation map is displayed alongside other information on Pembrokeshire County Council's information board posted at the top of Martins Haven Beach. Also displayed was a joint SWSFC and MNR poster, explaining the scallop byelaw, which will be replaced by a rather less subtle version in 2005 (see Appendix 9).

Staff time for this project includes work done for the proposed byelaw (see Section 6.8).

4.3 MANAGEMENT ISSUES

4.3.1 Dredging/beam trawling

None observed in 2004.

4.3.2 Potting *Project: RH03/05* *Watching brief*

Vessels operating in the MNR in 2004 are listed in Section 5.1 and for fishing effort estimates see Appendix 7.

4.3.3 Tangle and gill netting *Project: RH03/06* *Watching brief*

None observed in 2004.

4.3.4 Collection of shellfish by divers *Project: RH36/01* *Watching brief*

Results of the 2004 Scallop Survey carried out by volunteer dive teams indicate that scallops are still being taken from the Martin's Haven Area (see Section 7).

A diver was seen with scallops by one of our volunteer divers and warned about the byelaw. The volunteer's call to West Wales Divers to check his facts on the byelaw coincided with the visit of a SWSFC Fishery Officer, who then went to Martins Haven, but by then the scallops had been returned to the sea. The *Dale Princess* crew reported seeing live scallops on Martins Haven beach, but identification of those responsible was problematic. Another diver was persuaded to return scallops to the water by PN after being seen coming out of Martins Haven with a bag full in February 2005. His defence was that he "thought it was a voluntary ban on taking scallops", which reflects the attitude of a, thankfully, decreasing number of divers to voluntary measures.

This increase in incidents reflects the increasing numbers of scallops now encountered by divers and the increased temptation to help themselves! This despite the byelaw poster on display at the beach and in the exhibition. With this in mind a more eye-catching design will be used in 2005 (see Appendix 9).

Members of Putney Sub Aqua club were given a roasting via e-mail when it was brought to PN's attention that their website was extolling the virtues of diving at "Skomer", but illustrating the article with pictures of divers brandishing handfuls of scallops. It transpired that the reference to "Skomer" actually meant Pembrokeshire and it could be seen from the photographs that they had been diving in the Milford Haven waterway. Nevertheless, it was put to them that their article did not send the right sort of message and it has since been removed from the website.

4.3.5 Collection of curios *Project: RH36/01* *Watching brief*

None observed in 2004.

4.3.6 Collection of specimens for education and research *Project: AS20/01*

No permits were issued for collection of specimens.

4.3.7 Disturbance to seals *Project: RH03/04* *Watching brief*

Permits were issued to Wildlife Trust South and West Wales seal census workers under contract to CCW on Skomer to enable them to approach and dye-mark seal pups.

Temporary signs were again erected at the Deer Park entrances and the head of Martin's Haven beach to increase public awareness about seals.

NNR staff noted 7 individuals with either monofilament line or netting fast around the neck.

One adult, one yearling, one moult and six pups were noted with tar spots.

Seals hauled out on North Haven beach were disturbed into the water on three occasions throughout the season by commercial ventures; once in April by Dale Sea Safaris and twice in November by the potting boat M1140. In all incidents some but not all of the seals on the beach were disturbed enough to go into the water. On three separate occasions yacht tenders or motor cruisers were responsible for flushing seals off the Loaf.

A low-flying aircraft on 26th October disturbed the haul out at Castle Bay. About half of the 126 seals fled in to the water.

Kathy Hopewell, a student from Pembrokeshire College, recorded levels of disturbance to seals that used Deer Park beaches during the pupping season in 2004 and also made the first identification records of adult seals using the mainland beaches using a combination of digital video and sketches. The disturbance studies continue work carried out by other Pembrokeshire College students in previous years.

The MNR trial 'Seal Watching leaflet' has now been produced and is distributed via the MNR exhibition and the National Trust car park at Martins Haven. The leaflet includes information on seals and how to minimise disturbance whilst watching them.

4.3.8 Disturbance to cliff nesting seabirds *Project: RH03/03* *Watching brief*

Bird disturbance incidents included the disturbance of auks by commercial fishing boats. A number of boats were seen entering the Wick, including RIBs belonging to three of the local boat charter operators. The incidents were blamed on new skippers unfamiliar with the area and steps were taken to avoid future problems.

4.3.9 Spear fishing *Project: RH36/01* *Watching brief*

None observed in 2004.

4.3.10 Angling*Project: RH03/08 Watching brief*

See Section 5 for numbers of anglers observed. One impact of angling was observed when a new monitoring site was being set up and a sea fan that had been recorded at the site was found detached and tangled in fishing line on a subsequent visit. The fan has been experimentally reattached to one of the site markers to see if it is possible for it to re-establish itself.

4.3.11 Mooring and Anchoring*Project: RH36/01 Watching brief*

Visitor moorings continue to be popular with both yachts and motorboats and the capacity has been increased with the adoption of the former Dale Fort FSC buoy. One yacht, however, did drop anchor in the North Haven eelgrass bed before realising where they were. The new eelgrass bed marker buoys have stood up well to the rigours of the 2004 season (see section 3.4) and will be redeployed in 2005.

4.3.12 General Boating*Project: RH03/02 Watching brief*

Several vessels were reminded of speed limits in the MNR and a couple of incidents were recorded by Island staff of high speed wake-boarding or “doughnut” riding in North and South Havens.

4.3.13 Wrecks

The *Lucy* wreck continues to be a very popular dive site (28% of recorded dives in the MNR). The top buoy marking the wreck was maintained.

4.3.14 Oil*Project: RH07/01 Watching brief*

No records of pollution were made in 2004. However, the behaviour of one tanker prompted PN to contact MHPA when the vessel manoeuvred very close to Martin’s Haven before anchoring. A message was passed to the master of the vessel, but it was seen very close to the shore on a subsequent occasion.

**4.3.15 Water Quality** *Project: RP63/03 Staff time: Estimated 7.0 Actual: 0*

Bathing water quality data for Martins Haven continues to be obtained from Pembrokeshire County Council (see Table 4.1).

TABLE 4.1 WATER QUALITY DATA FOR MARTIN'S HAVEN 2004

Sampling Date	Sampling Time	Total Coliforms cfu/100ml	Faecal Coliforms cfu/100ml	Faecal Streptococci cfu/100ml
05/05/04	10.45	<10	<10	<10
12/05/04	10.23	9	<10	9
17/05/04	10.30	<10	<10	<10
24/05/04	9.23	<10	<10	<10
02/06/04	11.00	<10	<10	<10
07/06/04	9.24	<10	<10	<10
14/06/04	12.15	<10	<10	<10
21/06/04	12.18	55	55	18
28/06/04	9.49	<10	<10	<10
05/07/04	10.30	<10	<10	<10
12/07/04	11.50	<10	<10	<10
19/07/04	10.30	<10	<10	<10
26/07/04	9.38	<10	<10	<10
02/08/04	11.15	<10	<10	<10
09/08/04	9.05	9	9	<10
16/08/04	10.00	118	9	<10
23/08/04	9.30	27	<10	<10
01/09/04	9.04	9	9	<10
06/09/04	10.20	<10	<10	<10
13/09/04	9.54	18	18	9
Excellent Quality= less than 500 total coliforms and less than 100 faecal coliforms per 100ml of water. EC guidance standard = 80% achievement.				

5 VISITORS AND USE OF THE MNR

5.1. COMMERCIAL USE

Project: RH90/01 Staff time: Estimated 12.5 Actual: 17.6

Commercial fishing activity in Skomer MNR was recorded as in previous years by recording observations of fishing vessels operating in the MNR and by weekly mapping of pot marker buoy distribution.

19 pot maps were produced in 2004 using GPS positions and these have been transferred to the GIS mapping system MapInfo. The summary map for 2004 can be seen in Appendix 7 together with a graph summarising observed fishing effort since 1992.

Fishing boats operating in the MNR during 2004 were recorded as *Crowded Hour* (M1140), *Lydon* (M1050), and *Progress* (M32). Two other vessels, M888 and K1126, were also recorded in the MNR.

5.2 RECREATIONAL USE

Project: RH33/01 Staff time: Estimated 5.0 Actual: 5.9 (data entry)

Types and numbers of visitors recorded for the year ending 31 March 2004 are summarised in Table 5.1 and Figures 5.1 to 5.4. Most user groups have seen a decrease in numbers compared with 2003, but most of this can be put down to bad weather in August. Where there would normally be a peak corresponding with the holiday season, it is absent, which agrees with reports of low numbers of customers from local dive charter operators and dive shops.

Figures do not include the routine sailings of the *Dale Princess* or commercial sightseeing boats passing through the MNR.

MNR Honorary Wardens and the Skomer Warden and staff have again passed on records, which are very useful in gaining as comprehensive a picture of the use of the MNR as possible.

5.3 CASUALTY ASSISTANCE

MNR staff were involved in two incidents where assistance was given to vessels in difficulties.

The first involved the RIB *Kittiwake* that was without engine power due to a broken ignition key and was drifting in Broad Sound. The RIB was towed by *Skalmey* to South Haven where the tow was passed to the Little and Broad Haven inshore lifeboat.





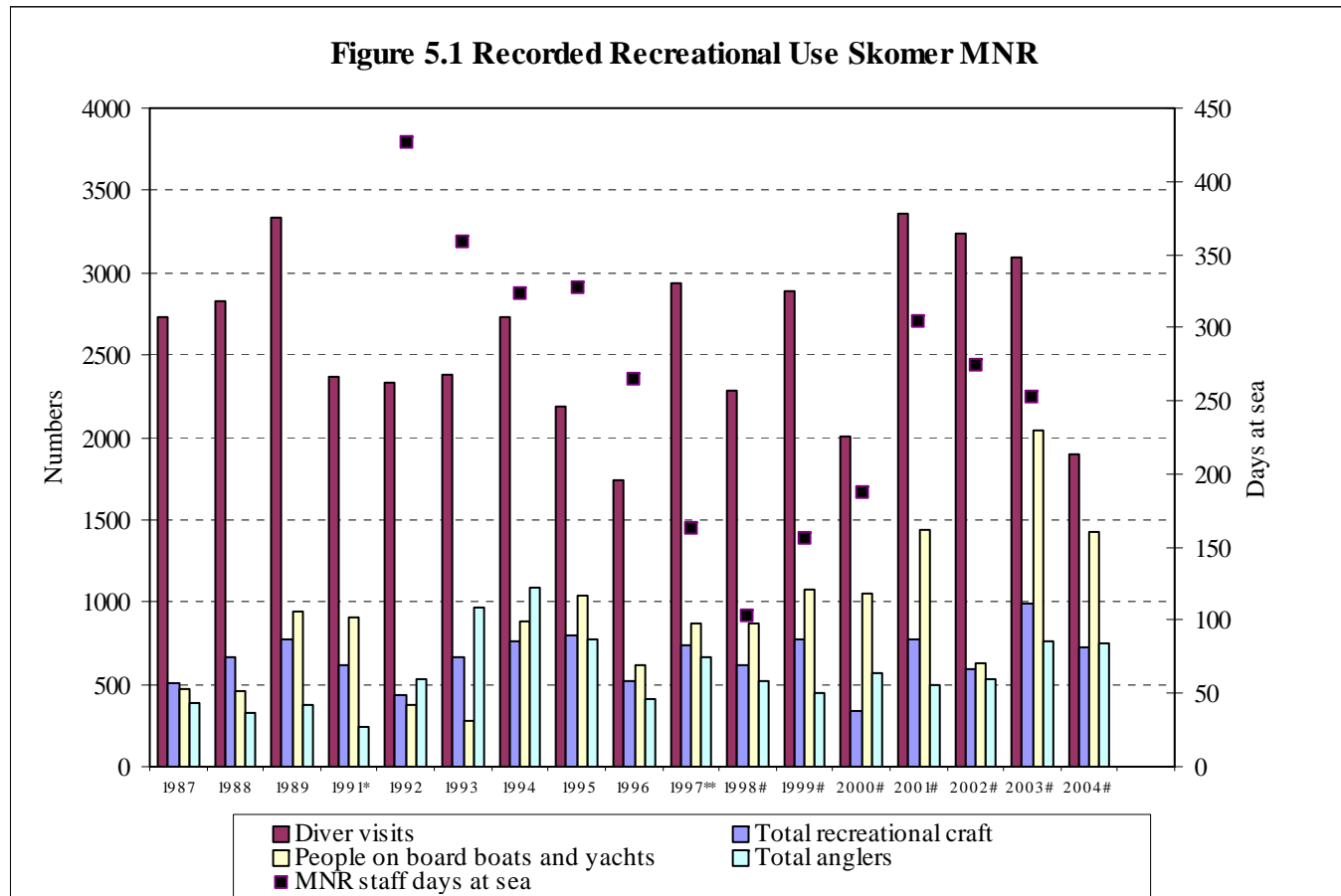
The second was a request from Milford Haven Coastguard to assist a yacht suspected of having struck a submerged object in Jack Sound. *Skalmey* stood by until relieved by the Angle lifeboat, which escorted the yacht into Milford Haven.

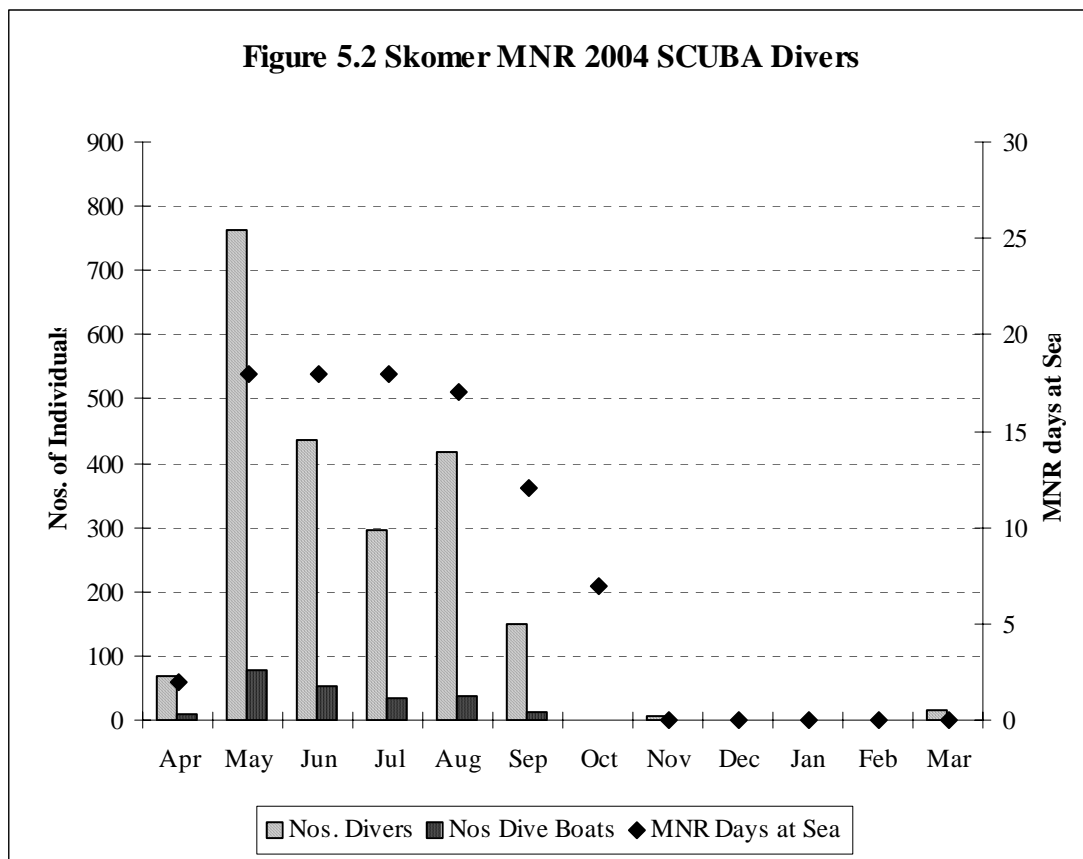
Skalmey had just returned to Martin's Haven when the MNR Landrover was pressed into service to help an elderly couple whose car was stuck in the shingle beach.

TABLE 5.1 RECORDED RECREATIONAL USE OF SKOMER MNR

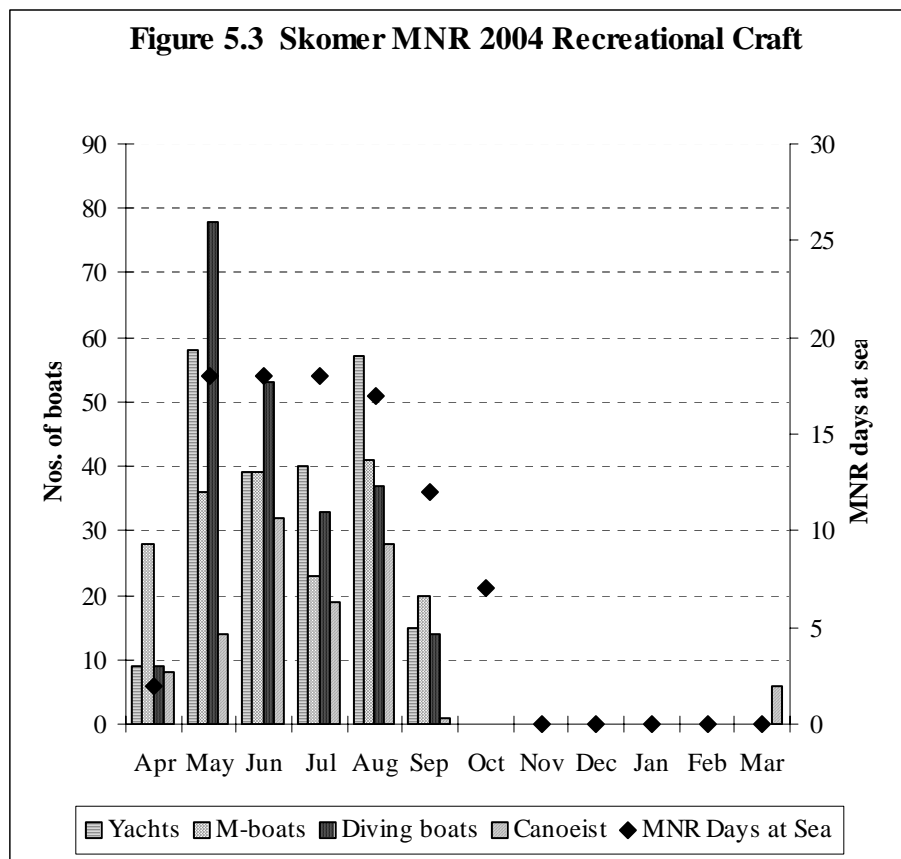
	1987	1988	1989	1991*	1992	1993	1994	1995	1996	1997**	1998#	1999#	2000#	2001#	2002#	2003#	2004#
Diver visits (diver days)	2727	2827	3334	2368	2327	2379	2730	2192	1745	2934	2287	2893	2008	3360	3234	3089	2154
Shore dives @ Martins Haven	418	511	662	34	436	678	848	537	482	814	817	500	537	537	539	522	666
Dive boat visits	358	410	477	341	293	325	394	354	247	361	254	378	278	349	367	350	224
Total yachts	147	139	237	203	99	155	213	299	173	218	183	221	232	266	121	338	218
Total motot boats	-	37	65	70	47	95	129	65	39	70	87	95	93	153	70	225	187
Canoes	-	80				91	27	74	62	84	98	79	63	48	38	80	108
Total recreational craft	505	666	779	614	439	666	763	792	521	733	622	773	333	779	596	993	721
Total people on board boats	470	460	939	905	380	273	883	1041	612	874	868	1075	1051	1435	626	2041	1424
Shore anglers	383	216	300	199	437	766	735	600	331	630	433	386	501	476	458	519	556
Boat anglers	-	108	73	43	93	199	347	173	81	30	89	60	72	18	70	243	199
Total anglers	383	324	373	242	530	965	1082	773	412	660	522	446	573	494	528	762	755

* Part of 1991 only ** Figures are for Jan 97 to end of March 98 # Figures are for financial year April to end of March





	MNR Days at Sea	Nos. Divers	Nos Dive Boats	Total Records
April	2	69	9	6
May	18	763	78	82
June	18	436	53	57
July	18	295	33	40
August	17	418	37	58
September	12	151	14	24
October	7	0	0	0
November	0	5	0	1
December	0	0	0	1
January	0	0	0	0
February	0	1	0	1
March	0	16	0	2
Total	92	2154	224	272

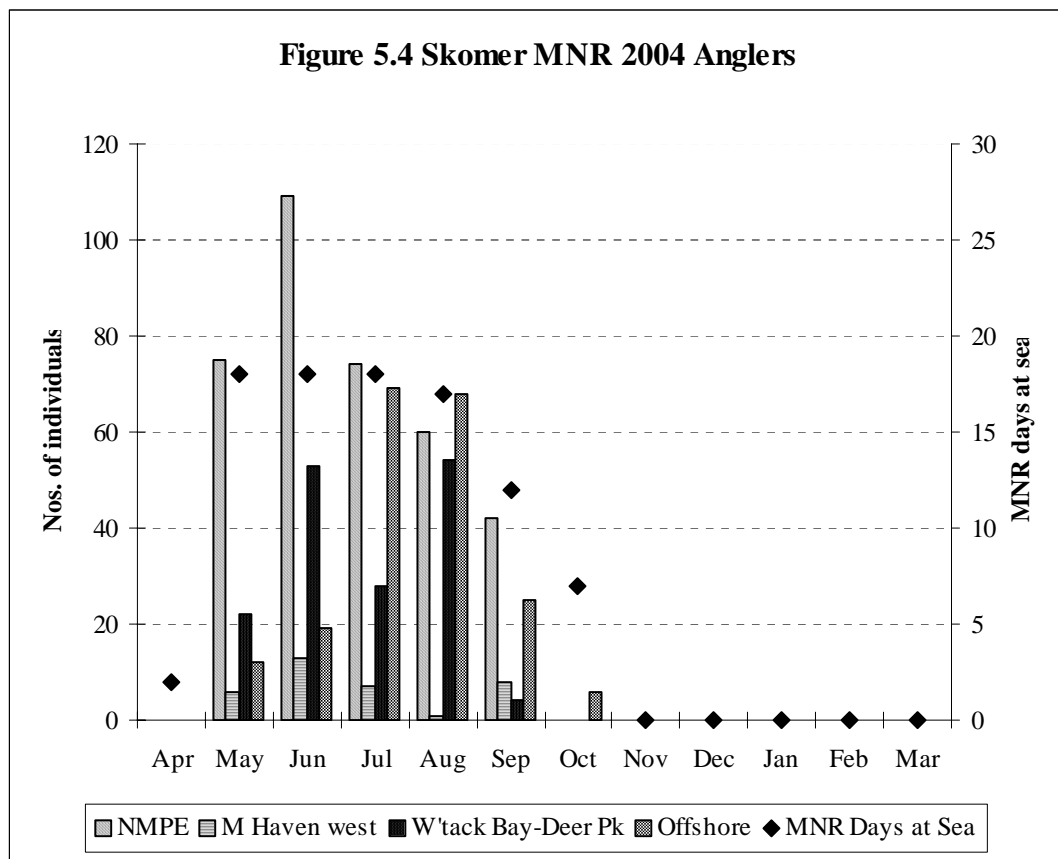


	MNR Days at Sea	Yachts	M-boats	Canoeist	Diving boats	Est POB*	POB**
April	2	9	28	8	9	142	29
May	18	58	36	14	78	315	143
June	18	39	39	32	53	293	61
July	18	40	23	19	33	209	54
August	17	57	41	28	37	338	124
September	12	15	20	1	14	127	25
October	7	0	0	0	0	0	0
November	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0
January	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0
March	0	0	0	6	0	0	0
Total	92	218	187	108	224	1424	436

**POB = Total of people aboard yachts and motor-boats - actual observations

*Est POB = Total of people aboard yachts and motor boats estimated for all vessels using mean below

Mean POB Yts & MBs = 3.5161



	MNR Days at Sea	NMPE*	M Haven west	W'tack Bay-Deer Pk	Offshore
April	2	0	0	0	0
May	18	75	6	22	12
June	18	109	13	53	19
July	18	74	7	28	69
August	17	60	1	54	68
September	12	42	8	4	25
October	7	0	0	0	6
November	0	0	0	0	0
December	0	0	0	0	0
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
Total	92	360	35	161	199

*NMPE = North Marloes Peninsula East

6 LIAISON AND ADVISORY COMMITTEES

6.1 ADVISORY COMMITTEE

Project: AP80/01 Staff time: Estimated 13.6 Actual: 7.9

The annual Advisory Committee meeting was held in April 2004 and another meeting was held in November 2004 to discuss the proposed MNR fishery byelaw (see Section 6.8). Dr Robin Crump continued as the chairman of the main committee, and MB and KL acted as secretariat. Presentations summarising the annual report and the project status report were made by PN and MB respectively at the annual meeting and PN gave a presentation about the proposed byelaw at the November meeting.

6.2 WILDLIFE TRUST SOUTH AND WEST WALES

Project: ML30/02 Staff time: Estimated 3.0 Actual: 1.2

Liaison with Skomer Island NNR staff and Wildlife Trust South and West Wales continued throughout the year on an informal basis and via the MNR Advisory Committee. The Trust was also the contractor for the annual seal pup monitoring project.

Practical support of the Skomer Island NNR included help with boats and mail delivery.

MNR staff also continue to represent Skomer and Skokholm Wardens on the working group for the Pembrokeshire Marine Code (a marine code of practice for commercial tourist boats). (See Section 6.7).

PN attended a meeting to discuss MNR involvement with the Skomer Island Heritage Lottery building project and the minimisation of risks to marine features.

MNR staff are grateful to the Skomer NNR staff for their observations and records of visitors to the MNR, particularly on days when MNR staff are not on the water.

6.3 SOUTH WALES SEA FISHERIES COMMITTEE

Project: ML40/02 Staff time: Estimated 2.5 Actual: 15.6

Liaison has continued with Phil Coates, SWSFC director, and with local Fisheries Officers. Liaison is also maintained via the Skomer MNR Advisory Committee.

PN and Phil Coates have continued to work on the proposed fishery byelaw for the MNR. PN gave a presentation to the SWSFC at their quarterly meeting in February at which the Committee agreed that the draft byelaw should go to public consultation (see Section 6.8).

SWSFC Fishery Officer Colin Trundle also assisted during the volunteer diver survey of scallops and Fishery Officer Larry Richardson visited Martin's Haven when a diver was found taking scallops. We would like to wish Larry well on his retirement.



6.4 PEMBROKESHIRE COAST NATIONAL PARK

Project: ML40/03 Staff time: Estimated 0.3 Actual: 0.8

Close liaison continues with:

- X Jane Hodges, Advisory Committee member and HW;
- X Steve Drinkwater: Research and Education subcommittee member;
- X Ian Meopham, Ranger;
- X Mike Howe, Ranger,
- X Polly Groom, Archaeologist
- X Charles Mathieson, Recreation Management Officer.

KL contributed an article to the PCNP's "Coast to coast" magazine featuring "Pembrokeshire's own corals" (Appendix 5).

6.5 NATIONAL TRUST

Project: ML30/03 Staff time: Estimated 0.3 Actual: 0.2

Skomer MNR staff continued to liaise with National Trust. Informal liaison is maintained with Warden Debbie Kearsley and Jonathan Hughes through the Advisory Committee, subcommittees and visits to Martin's Haven.

NT car park attendants at Martins Haven continued to serve as HWs (see Section 2.2 and 8.2) and assisted MNR staff with opening and closing the MNR exhibition and distributing 'Seal Watching' leaflets.

6.6 OTHER ORGANISATIONS AND INDIVIDUALS

Liaison with a wide range of organisations and individuals has continued. A good deal of this has been linked with the proposed fishery byelaw (see Section 6.8) and has covered a wide range of local community interests as well as members of the Advisory Committee.

Project: ML30/01 Staff time: Estimated 0.2 Actual: 0.2

Project: ML50/01 Staff time: Estimated 0.3 Actual: 2.3

Skomer MNR neighbours at West Hook, East Hook and Treehill farms continued on an informal basis, and PN and MB met with the Marloes and St Brides Community Council on two occasions to discuss the proposed byelaw and give a presentation about the proposal. A marine "Fun Day" was organised by MNR staff aimed at local children (see section 8).

Project: ML40/01 Staff time: Estimated 0.1 Actual: 0.1

Local authorities continue to be represented on the Skomer MNR Advisory Committee and liaison also continued through the Pembrokeshire Outdoor Charter group and through local officers responsible for beach signs.

PCC also kindly provide water quality results for Martins Haven (see section 4.3.15).

MNR staff were involved in Pembrokeshire Fish Week events.

Project: ML60/01 Staff time: Estimated 2.1 Actual: 0

Contact with the Maritime and Coastguard Agency is maintained for health and safety reasons during fieldwork and also on an informal basis. MB is an auxiliary with the local Coastguard cliff rescue team.

Project: ML80/02 Staff time: Estimated 1.5 Actual: 1.9

Liaison with the most active commercial fishermen using Skomer MNR was continued. PN has also had meetings with individual fishermen who use the MNR to discuss the fishery byelaw proposal. One local fisherman also continued to serve as an Honorary Warden.

MNR staff have also liaised with the fishermen's association; the South and West Wales Fishing Communities, via the Advisory Committee and during consultation over the proposed byelaw. A meeting with members of the SWWFC is planned for early April 2005.

Project: ML80/03 Staff time: Estimated 0.3 Actual: 0.5

Skomer MNR staff continued to liaise with recreational bodies including diving groups requiring information and local commercial dive charter operators.

PN also gave an illustrated talk to the new intake of Celtic Divers Sub-Aqua Club in March 2005.

Commercial passenger operators taking sightseeing trips around Skomer continued to be provided with information to ensure adherence to the MNR's byelaws and codes of conduct.

Project: ML80/06 Staff time: Estimated 3.0 Actual: 6.6

In addition to all the informal and formal consultation over the proposed fishery byelaw it has been a very busy year in terms of liaison with other organisations, particularly academic bodies:

This included dealing with individual student and other enquiries from universities at Bangor, Swansea, Cardiff, Bristol, Plymouth, York and Hull.

MNR staff gave talks to visiting groups from Acorn School in Gloucester, Pembrokeshire College and Swansea University.

An approach has been made by a PhD student from Nottingham University to attempt to draw up a management plan for the marine archaeology of the MNR. Site visits are intended to take place in 2005.

The MNR has again provided a placement for a student from Pembrokeshire College. Kathy Hopewell continued work done by previous Pembrokeshire College students studying disturbance to the seals using beaches on the Deer Park and to start individual identification records of adult seals.

A publication prepared in conjunction with a researcher at Aberystwyth University on the techniques used in MNR sponge monitoring has been submitted and another paper submitted by workers at the Royal Zoological Society using MNR seal data to test population models.

Project: ML80/05 Staff time: Estimated 10.0 Actual: 14.0

Skomer MNR staff continued to liaise with other individuals and groups. These included:

Mid and West Wales Fire Brigade, SMRU, SAC otter researchers, RSPCA seal rescue, Welsh Marine Life Rescue, MCS, Dorset Wildlife Trust officers (Lulworth Cove), MarClim staff from Plymouth Marine Laboratories (see section 7), the Darwin Initiative, English Nature, Dale Fort FSC, MHWESG, the Irish Sea Pilot project, local Biodiversity Action Plan coordinator, Pembrokeshire Biodiversity Partnership (Appendix 10), Pembrokeshire Marine Code (Pembrokeshire Coastal Forum), MHPA, and RSPB.

MNR staff consulted with RSPCA staff in Swansea and Norfolk when surveyors on Skomer reported juvenile seals with bloody mouths. After much consideration it was concluded that the most likely cause was lungworm infestation, but that it was not necessarily life-threatening.



MNR staff have contributed to the Milford Haven Waterway Environmental Steering Group.

The MNR also hosted EN staff involved in setting up the NTZ at Lundy MNR when they visited Skomer MNR in June 2005.

6.7 WIDER MARINE ENVIRONMENTAL INITIATIVES

KL continued as the south and southwest Wales coordinator for Seasearch, a Marine Conservation Society initiative using volunteer divers to conduct >phase 1' style sub-littoral habitat surveys.

MNR staff have continued with their involvement in the Pembrokeshire Marine Code, which has been led by Pembrokeshire Coastal Forum. The codes have been rolled out to commercial tourist boat operators during the 2004 season along with free training and the awarding of "Seawise" accreditation. It is planned to extend the scheme to recreational watercraft users in 2005.

The MNR has also supplied details of MNR eelgrass survey methods to workers at CEFAS, who are developing tools for the Water Framework Directive. Examples of MNR work were included in a poster presented by CEFAS to a WFD meeting.

6.8 PROPOSED FISHERY BYELAW FOR SKOMER MNR

A great deal of informal consultation with a range of organisations and individuals has been carried out over the last year culminating in the preparation of the draft byelaw and its consideration by SWSFC. The proposed byelaw (Appendix 8) was advertised for two consecutive weeks and there followed a 4-week period of formal public consultation, which ends on 8th April 2005. The proposed byelaw and PN's covering document were posted on the SWSFC website from the date of advertisement.

The informal consultation was intended to help shape the byelaw and to address as many concerns as possible before the formal consultation.

In addition to the organisations already mentioned in this chapter and those represented on the Skomer MNR Advisory Committee MNR staff have spoken to or been in correspondence with individual anglers, dive clubs, angling charter operators, local residents, dive charter operators, Welsh Assembly Government staff, local MPs and MEPs, DEFRA, academics from Welsh and other universities and interested members of the public.

7 SCIENCE

7.1 RESEARCH AND EDUCATION SUBCOMMITTEE

No meetings of the Research and education subcommittee were held in 2004.

More detail of all the science projects undertaken at the MNR can be found in the “Project Status Report 2004”.

7.2 CONTRACT SCIENCE

Project code: RA03/01	MONITOR GREY SEALS	Priority: 1
	Estimated	Actual
Time:	30.0	26.5

Grey seal pup production on Skomer Island breeding sites was monitored under contract by Wildlife Trust South and West Wales and by MNR staff at mainland sites.

176 pups were recorded as being born on Skomer Island in 2004 and 59 on the mainland. This is an all time high total of 235, but survival rate was low at 73.2%, this is 7.3% lower than average for the last thirteen years. The low survival was probably influenced by several periods of bad weather that almost certainly caused some separation from cows and injury within the pup population. In 2004 the most prolific period was week 38 (13th – 19th September) when 47 pups were born. (See Appendix 2).



A report was prepared on the 'Grey Seal Breeding Census: Skomer Island, 2004' by Jane Matthews, (see Appendix 2).

Project code: RM03/04	MONITOR SEDIMENT EPIFAUNA	Priority: 1
	Estimated	Actual
Time:	42.0	35.2

The 5 yearly sediment surface and burrowing fauna survey was completed somewhat earlier than intended when it proved impossible to carry out the algal communities monitoring that had been planned for 2004.



Only preliminary results are available at the time of writing:

	2001	2004
Polychaetes	105	136
Crustacea	56	55
Molluscs	40	47
Echinoderms	6	10
Others	10	21
Total nos. individuals	7775	5902

7.3 IN-HOUSE MONITORING

Projects worked on during the year are summarised below and in the Skomer MNR Project Status Report 2004. Seal pupping data for the MNR mainland is included in Appendix 2.

Project code: RA01/01 RECORD CETACEANS

Priority: 2
Estimated **Actual**
 1.4 0.2

Time:

Cetaceans were recorded in Skomer MNR. Species numbers have yet to be collated from observations on Skomer and from the MNR Honorary Warden appointed to record sightings.

MNR staff were fortunate to be out monitoring when they came across a large pod of common dolphins.



Project code: RB01/01 RECORD VAGRANT & ALIEN SPECIES

Priority: 2
Estimated **Actual**
 0.3 0.3

Time:

Vagrant and alien species were recorded in Skomer MNR. MNR staff recorded several sightings of sunfish (*Mola mola*). *Dale Princess* crew sightings are still awaited for collation of all fish and cetacean records. Also recorded were strandings of by-the-wind sailors (*Vellela vellela*).



Project code: RM53 01 MONITOR SCALLOPS (*PECTEN MAXIMUS*) POPULATION
Priority: 1

	Estimated	Actual
Time:	44.0	117.5(!!!)

The 2004 survey was completed with a large team of 50 volunteer divers. Sites established in 2000 were resurveyed and a further 4 sites established. The total area surveyed was an impressive 10,632 m² and 1312 individual scallops were measured. Mean density for the whole MNR in 2004 was 0.12 m⁻², which represented a 3-fold increase since 2000 (0.04 m⁻²).

(see Appendix 4 for the synopsis).



Project code: RB03 01 MONITOR LITTORAL HABITATS/COMMUNITIES: MACRO-SCALE
Priority: 1

	Estimated	Actual
Time:	6.0	0.1

Viewpoint photographs were taken for sites on Skomer and for Deer park and Martins Haven.

Project code: RB03/02 MONITOR LITTORAL COMMUNITIES: MESO-SCALE
Priority: 1

	Estimated	Actual
Time:	12.0	35.2

Methods established in 2003 were continued. All site marking was completed and all results collected. The methods are detailed in the Skomer MNR Project Status Report 2004.

We have also continued our link with the MarClim project based at Plymouth Marine Laboratories, which offers an opportunity to compare the Skomer shores to the rest of the UK and contribute to the assessment of the effects of global warming.



Comparison of 2003 & 2004 littoral quadrat data.

Species	2003 Av.Frequency	2004 Av.Frequency
Barnacle cover (% cover)	32.41	41.66
Melaraphe neritoides	14.68	17.17
Patella spp. (adults)	14.00	17.08
Littorina 'saxatilis'	15.94	19.27
Lithothamnion sp.	4.58	10.76
Verrucaria "maura"	6.73	7.08
Diatom slime/ cyanobacteria	0.02	9.94
Mytilus edulis	7.61	7.67
Enteromorpha spp.	3.56	7.12
Osmundea pinnatifida	4.85	5.82
Corallina spp.	3.11	6.64
Fucus vesiculosus var lin	4.19	5.15
Chthamalus montagui	7.49	0.71
Lichina pygmaea	2.73	3.88
Pelvetia canaliculata	3.14	3.17
Hildenbrandia spp.	3.26	4.67
Ectocarpaceae indet.	2.06	5.18

Project code: RB06/01 MAINTAIN SPECIES LIST**Priority:** 2**Estimated****Actual****Time:**

3.5

0.7

Skomer MNR species list was maintained.

Project code: RM03/01 MONITOR EPIBENTHIC ROCK COMMUNITIES: MESO-SCALE**Priority:** 1**Estimated****Actual****Time:**

18.5

1.9

One set of photographs was taken at the North Wall and at the Thorn Rock site for epibenthic rock communities photo monitoring.

Project code: RM03/05 MONITOR BARNACLE & MOLLUSC POPULATIONS**Priority:** 1**Estimated****Actual****Time:**

6.0

0

See Project: RB03/02 MONITOR LITTORAL COMMUNITIES: MESO-SCALE for details.

Project code: RM13/01 MONITOR SPONGE POPULATIONS	Priority: 1
	Estimated Actual
Time:	24.00 11.6

Sponge photographic monitoring has continued and shows that the abundance of sponges has increased in the last 3 years and the 2003 species survey showed high diversity with some new species to add to the Skomer MNR records.



Project code: RM23/01 MONITOR EUNICELLA: POPULATION	Priority: 1
	Estimated Actual
Time:	32.5 13.7

105 colonies were located, but one colony at Bull Hole was not found. Two unknown colonies were found detached at Rye Rocks and one at West Hook during 2004. The colony at the new West Hook site was experimentally reattached to a site marker when it was found entangled in fishing line and detached from the seabed.

There were 5 records of entanglement in 2004. The increase in epibiota fouling seen in 2002 and 2003 now seems to be declining and the number of sea fans with necrotic areas has stabilized.

Tritonia nilsodhneri and *Simnia patula* have both been recorded in 2004. Previous records suggest that this is the first confirmed record of *S. patula* on *E. verrucosa*. *T. nilsodhneri* has not been recorded since 1996 (W. Sanderson *pers comm*). The sightings all came from the North coast of Skomer Island (North wall, The Pool & Bernies Rocks) and egg cases of *Tritonia nilsodhneri* were seen at North Wall (East).

For full results see Skomer MNR Project Status Report 2003.

Project code: RM24/01 RECORD EUNICELLA: GROWTH RATE	Priority: 1
	Estimated Actual
Time:	12.0 0

Stereo photographic samples were taken of four seafan colonies (*Eunicella verrucosa*) at North Wall site. Photographs of other seafans taken for project RM 23/01 are also used for this project and a subset of the seafans monitored will be selected for growth analysis in order to improve the methodology.

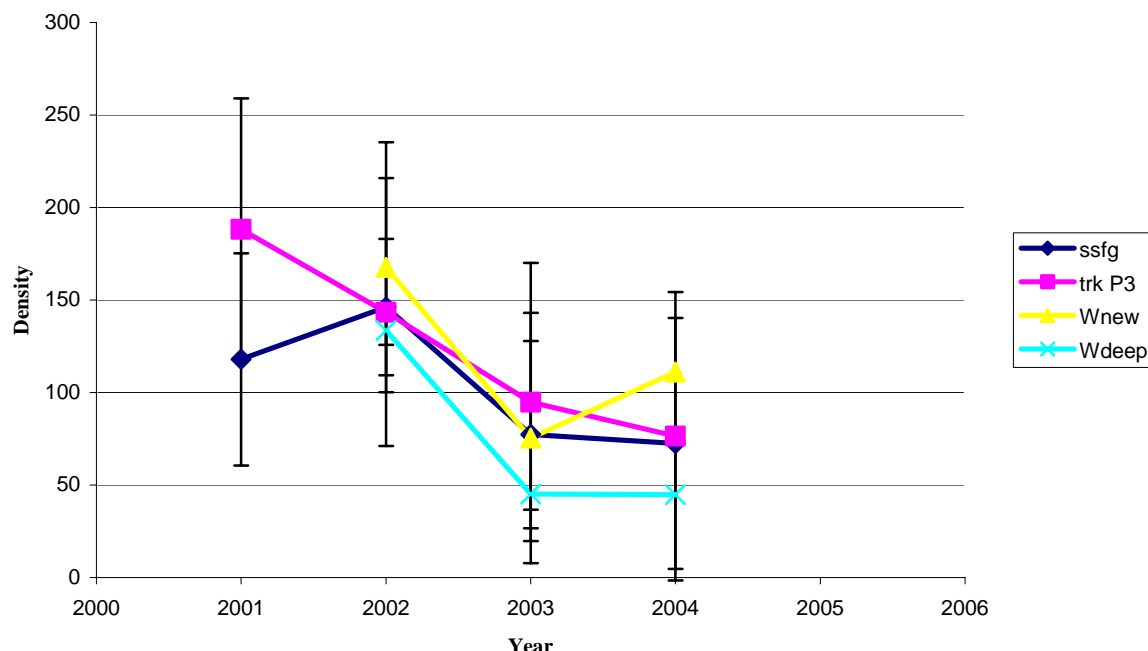
Project code: RM63/01 MONITOR PENTAPORA POPULATION	Priority: 1
	Estimated Actual
Time:	11.0 9.1

Project code: RM23/05 MONITOR PARAZOANTHUS

Priority: 1

Estimated **Actual**
Time: 5.5 9.4

Parazoanthus axinellae colonies were photographed at established MNR sites using the methods developed in 2001.



The frequency results suggest that there has been a decrease in colony sizes in 2004 compared to 2003, although there are not enough data sets to draw any firm conclusions from the project. The density method used in 2003 was repeated again in 2004 and the results suggest that polyp density has remained stable.

Project code: RM23/04 MONITOR CUP CORALS

Priority: 1

Estimated **Actual**
Time: 6.0 2.3

Balanophyllia regia: Stereo photographic samples were taken at the five 50 x 40cm quadrats at Thorn rock (established in 1984). Individuals have been traced for 18 years. Evidence of recruitment has been observed, however this may be due to small individuals becoming visible due to low levels of seabed sedimentation.

Abundance of *Balanophyllia regia* in The Wick

	2002		2003		2004	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
A	40.5	26.3	50.4	43.1	55	47.2
B	64.6	36.3	71.9	39.3	95.3	40.1
C	53.1	33.4	49.9	42.5	59.6	57.7



The average number of cup corals has increased but there are

no significant differences in densities observed between 2003 and 2004 for transects A, B or C (two-sample t-Test). It was noted in the field that there was very little silt on the bedrock.

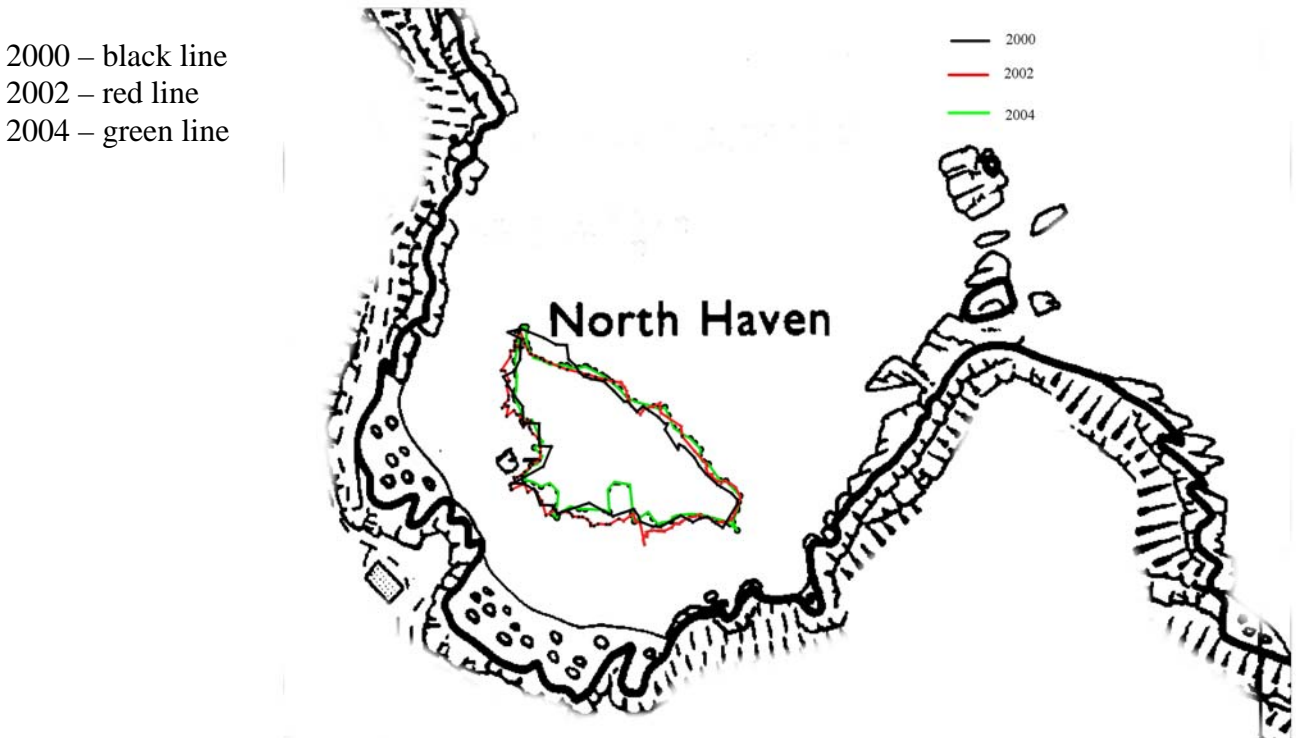
Caryophyllia smithii: Number at the Thorn Rock site have shown an apparent increase, but the changes in mean abundance observed may have been due to variable levels of surface sediment affecting the actual numbers visible during recording.

For full results see Skomer MNR Project Status Report 2004.

Project code: RF23/01 MONITOR EELGRASS (*ZOSTERA MARINA*) **Priority:** 1

	Estimated	Actual
Time:	0.6	1.9

A GPS-mapped boundary swim was carried out in 2004. The area compares well with previous boundary maps.



Project code: RP04/01 RECORD METEOROLOGICAL FACTORS **Priority:** 1

	Estimated	Actual
Time:	2.5	0.8

The summary for January - December 2004:

Maximum temperature of 23.68 degrees Celsius was recorded in August.

Minimum temperature of -0.22 degrees Celsius was recorded in February.

Annual wind speed >22knots (Gale Force 6) frequency 31.8 %*

Annual Maximum gust, January, 85.21 knots

Direction of Maximum gust, 264.8 degrees

Annual sunshine hours 652.49

Mean monthly sunshine hours 54.37 hrs

Average monthly net radiation 46.59

Annual rainfall, 745.06mm

Monthly average rainfall, 62.09mm

* Standardised data to 100% i.e. missing data filled in/estimated

**Project code: RP63/01 MONITOR SEAWATER TURBIDITY / SUSPENDED Priority: 1**

	Estimated	Actual
Time:	7.0	12.3

Turbidity was measured in Skomer MNR by Secchi disc and by automatic logger.

The self-recording suspended sediment probe was deployed from mid May to the beginning of October 2004 and data analysed graphically. The logger has been deployed throughout the winter of 2004/5.

10 seawater samples were taken during 2004 to be filtered and the weight of sediment determined to allow better calibration of the probe.

20 measurements of turbidity were made using Secchi disc between May and October 2004 at the OMS and 17 at Thorn Rock. The maximum reading (clearest water) between June and September was 9.5 m for OMS and 7.6 m at Thorn Rock.

Project code: RP63/03 MONITOR SEA WATER CHEMISTRY	Estimated	Actual	Priority: 2
	7.0	0	

Bathing water quality data for Martins Haven continues to be obtained from Pembrokeshire County Council (see section 4.3.15 for data).

Project code: RP63/04 MONITOR SEABED SEDIMENTATION	Estimated	Actual	Priority: 1

Time: 7.0 3.0

A total of 10 seabed sedimentation samples were collected at Skomer MNR using passive sediment traps at the OMS site. A second OMS-type frame has been prepared to deploy at Thorn Rock in 2005 as a replacement for the seabed wreckage previously used for mounting the sediment trap, which has broken up too badly to be able to deploy the trap any more.



No analysis is intended with the samples that are stored frozen unless episodes of unusually high turbidity are recorded in project RP63/01.

Project code: RP64/01 RECORD SEAWATER TEMPERATURE

Priority: 1

Estimated

Actual

Time: 10.0

5.1

Seawater temperature data was collected at the Skomer MNR Oceanographic Monitoring Site (OMS) using a Valeport Series 600 MkII conductivity, temperature, depth and salinity probe at depth intervals of 5m from surface to above the seabed. 23 profiles were recorded between May and October 2004 in conjunction with projects to measure turbidity and salinity.



By having two Minilog temperature loggers working in relays on the OMS frame we have again been able to record continuous hourly seabed temperatures in 2004.

Maximum surface temperature of 16.8 degrees Celsius was recorded in August; minimum surface temperature of 10.3 degrees Celsius was recorded at the beginning of May.

Minimum seabed temperature of 7.7 degrees Celsius was recorded during March, and maximum seabed temperature of 16.8 degrees Celsius was recorded at the end of August 2004.

Seawater temperature data is also analysed and summarised for use in statistical studies of biological communities.

Project code: RP64/02 RECORD SEAWATER SALINITY

Priority: 2

Estimated

Actual

Time: 5.0

4.8

Seawater salinity data was collected at the Skomer MNR Oceanographic Monitoring Site (OMS) using a Valeport Series 600 MkII conductivity, temperature, depth and salinity probe at depth intervals of 5m from surface to above the seabed. 18 profiles were recorded between April and October 2003 in conjunction with projects to measure turbidity and temperature.

Salinity varied between 34.7 and 35.4 parts per thousand.

Project code: RP64/04 RECORD TIDAL REGIME **Priority:** 1

	Estimated	Actual
Time:	2.5	0

Tidal height data for Skomer MNR was recorded from the end of May to the beginning of October 2004 by using the depth recording facility of one of the Minilog temperature loggers. No tidal current data was collected other than notes on slack water times.

Project code: RV40/01 COLLATE BATHYMETRIC INFORMATION **Priority:** 2

	Estimated	Actual
Time:	5.0	0.0

See project RP32/01.

Project code: RV40/02 MAP MONITORING SITES **Priority:** 1

	Estimated	Actual
Time:	9.0	0.5

Some mapping of new and existing monitoring sites took place. New sites included West Hook (for *Pentapora* and *Eunicella*). Further mapping was carried out at Bull Hole. It is hoped to refine existing multibeam maps of monitoring sites with the help of a student from Cardiff University (see below).

Project code: RP32/01 SURVEY SEABED TOPOGRAPHY **Priority:** 2

	Estimated	Actual
Time:	8.0	0

No further survey of seabed topography was carried out at Skomer MNR. A student from Cardiff University is planning to come to the MNR to carry out surveys using the University's recently acquired bathymetric equipment.

7.4 DATA HANDLING DEVELOPMENT

With many analyses tested and data storage spreadsheets now refined, keeping on top of ongoing data analysis has become much easier. There still remains a backlog of photographic data that requires analysis, but it is hoped to address at least part of this by collaboration with workers at Aberystwyth University.

7.5 OTHER WORK

A small number of clippings were again taken from MNR *Eunicella* colonies to help another CCW Species Challenge funded project investigating the genetics of sea fans.

MNR data continues to feed into Biodiversity Action Plans for the pink sea fan, eelgrass and associated species and to local BAP for the additional species of seals, and cushion stars.



MNR staff have contributed to the Irish Sea Pilot project and also to various Pembrokeshire Marine SAC projects.

As has also been mentioned in Section 6, the MNR has been able to pass on the experience of monitoring eelgrass to workers designing the practical implementation of the Water Framework Directive.

8 EDUCATION AND INTERPRETATION

8.1 RESEARCH AND EDUCATION SUBCOMMITTEE

No meetings of the Research and Education subcommittee were held in 2004. We are still awaiting developments with the Skomer Heritage Lottery Fund Interpretation project. Once we have details of plans for the project, which is likely to involve marine interpretation and the MNR exhibition, we will endeavour to involve the subcommittee.

Project: MI50/02 Staff time: Estimated 0.6 Actual: 3.9

The 2004 reprint of the MNR interpretative booklet "Stars, squirts and slugs...marine life in an underwater refuge" has been sufficient to last through the 2004 season and into 2005.

8.2 FISHERMAN'S COTTAGE MNR EXHIBITION

Project: MI50/01 Staff time: Estimated 8.5 Actual: 3.7

Due to the failure of the "break-the beam" logging system we have no visitor data for the 2004 season. The exhibition was, however open from March to November with the NT car park attendants opening up for us when MNR staff were not available.

Further laminated posters have been produced for display on the semi-permanent central display in the exhibition and for use on the MNR's mobile display. The new posters feature close-up photographs of organisms found in sediments and details of MNR work on sea fans (see Appendix 6).

The poster with the "3D" computer-generated image of the MNR seabed with the sea taken away has been extremely popular, both with members of the public and professional seafarers. A framed copy has even appeared in a local pub! (Appendix 6)

The exhibition DVD player now plays the animation generated from the same digital bathymetric data as the poster.

8.3 OTHER INITIATIVES

The MNR mobile display using the posters mentioned above was used at:

- CCW monitoring workshop, Aberystwyth;
- 'Pembrokeshire Fish Week' at Milford docks;
- Fishguard Maritime Festival;
- MCS conference in November;
- MNR marine "Fun Day" in Marloes (see below);

It was also used at some talks and presentations.

8.4 TALKS AND PRESENTATIONS

Project: MI10/01 Staff time: Estimated 0.4 Actual: 0.8

Visitors to the Martins Haven office were given information about Skomer MNR. Enquiries included the perennial requests for tickets for the boat to Skomer, and enquiries about seals and marine life encountered by divers.

PN gave an impromptu talk to members of CCW Council who were visiting Skomer and also to the annual outing arranged for CCW Honorary and Voluntary Wardens, which in 2004 was to Skomer.

Jill Evans MEP also visited the MNR on a fact-finding visit in March 2005.



Project: ML80/06 Staff time: Estimated 3.0 Actual: 6.6

Skomer MNR liaison with academic and educational bodies continued. This included talks to visiting academic groups and supplying information to students (see Section 6.6). MNR staff gave talks to visiting groups from Cardiff, Glamorgan and Swansea Universities.

More interest has been generated in the MNR and the marine environment in general from schools, with visits from the Acorn School in Gloucester, Mary Immaculate School in Haverfordwest and the supply of posters and other materials to Ysgol Glanleddau in Haverfordwest.

An idea being developed for 2005 is an “Adopt a Seafan” project aimed at local primary schools. This would give schools the opportunity to follow the history and progress of an individual seafan, including its condition and growth, with annual updates.

Also aimed at school children was the MNR “Fun Day” held in August 2004 during the school holidays. Despite the somewhat inclement weather about 50 children and assorted parents and/or grandparents descended on Martin’s Haven for a seashore “safari” followed by games and other activities at Marloes Village Hall. A similar event is planned for 2005 as part of the “Year of the Sea” programme of events.



Project: MI00/01 Staff time: Estimated 1.5 Actual: 4.1

MNR staff had an active year giving presentations to a range of audiences:

PN gave a presentation to the Saundersfoot meeting of WI organisers in October, to the Pembrokeshire National Trust Association, to the CCW marine monitoring workshop in November/December and to Celtic Dive Club in March. There have also been numerous presentations to do with the proposed fishery byelaw for the MNR (see Section 6).

MB gave a presentation to visiting divers from Bristol University in June.

KL gave a presentation to the MCS Conference in Cardiff.

8.5 MEDIA

Project: ML70/01 Staff time: Estimated 3.0 Actual: 3.3

The proposed fishery byelaw for Skomer MNR and the public consultation exercise generated a good deal of media interest in 2004. Besides the statutory advertisements articles on the byelaw appeared in diving magazines, “Sea Angler” magazine, Western Telegraph, Milford Mercury and Western Mail, including statements of support from the local MP and the local MEP. PN was also interviewed by BBC Wales, Radio Pembrokeshire and BBC Radio Wales. Articles have been posted on the BBC Wales, MCS, WWF, and diving magazine websites and the subject has been a topic of various Internet discussion groups.

KL prepared an article entitled “Pembrokeshire’s own corals” for PCNP “Coast to Coast” publication. She has also contributed to CCW publications on rock pools and on seals.

PN was interviewed for an HTV programme produced by Element Productions and due to be broadcast in 2005.



9 ACKNOWLEDGEMENTS

The MNR staff thank all those who contributed to, or supported in any way the management of the MNR during 2004.

Thanks to:

- < Contributors to the Advisory committees, especially Dr Robin Crump, who chairs both the main committee and, with Dr Chris Wooldridge, the Research and Education subcommittee;
- < Phil Coates, Director SWSFC, for all his work on the proposed fishery byelaw;
- < Honorary Wardens;
- < Juan Brown and Skomer NNR staff;
- < Steve Myatt for voluntary warden assistance with diving, boat and shore fieldwork;
- < Nick Jeremy and Dawn Wilde for voluntary assistance with diving;
- < Kathy Hopewell for her work on the seal disturbance study;
- < The crew of the *Dale Princess*;
- < All our Honorary Wardens for contributing to user records and Brian and Lionel for making sure the exhibition opened as often as possible;
- < The volunteer diving teams that were involved in the scallop survey.

With apologies to anyone omitted from above.

APPENDIX 1

ABBREVIATIONS

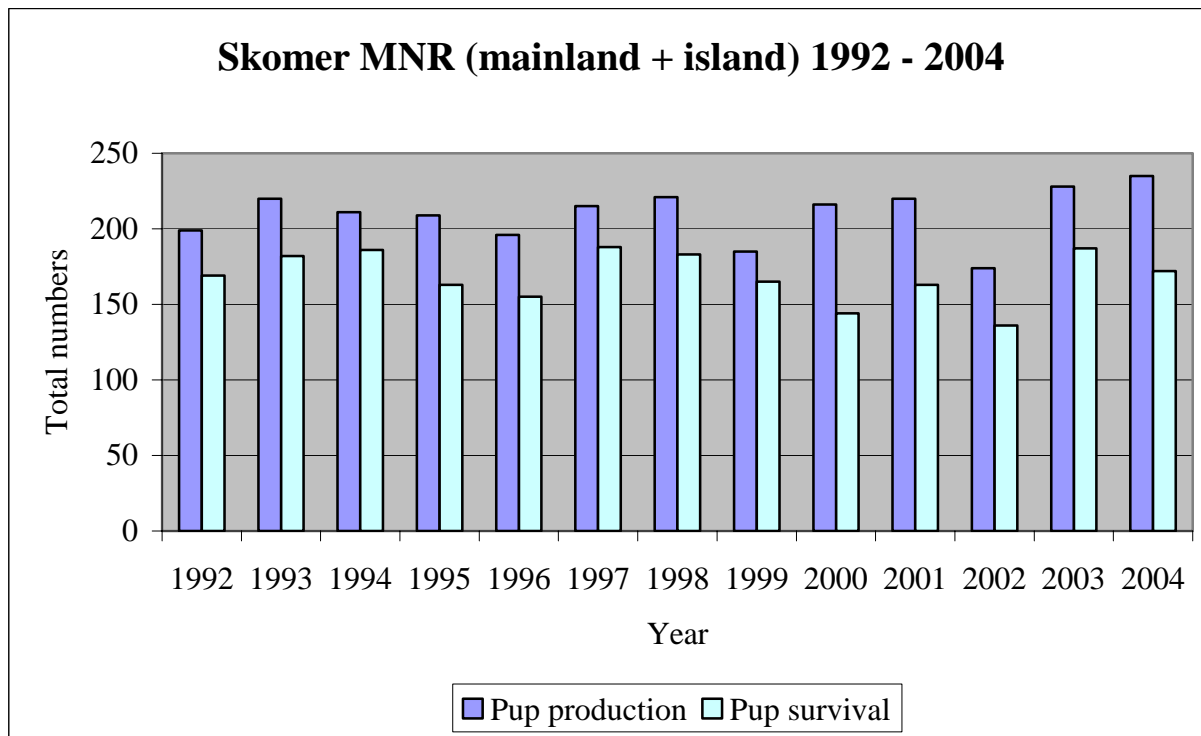
AcoP	Approved Code of Practice
AWS	Automatic weather station
BS-AC	British Sub-Aqua Club
CEFAS	Centre for Environment, Fisheries and Aquaculture Science
CCW	Countryside Council for Wales
DTI	Department of Trade and Industry
DEFRA	Department of Environment, Fisheries and Rural affairs
EA	Environment Agency
EN	English Nature
EU	European Union
FPV	Fisheries Protection Vessel
FSC	Field Studies Council
FTA	Fixed Term Appointment
HSC	Health and Safety Commission
HW	Honorary Warden
JNCC	Joint Nature Conservation Committee
MEP	Member of the European Parliament
MHPA	Milford Haven Port Authority
MHWEMSG	Milford Haven Waterway Environmental Monitoring Steering Group
MNR	Marine Nature Reserve
MCA	Marine Coastguard Agency
MCO	Marine Conservation Officer
MCS	Marine Conservation Society
NNR	National Nature Reserve
NT	National Trust
OMS	Oceanographic monitoring site
PCC	Pembrokeshire County Council
PCF	Pembrokeshire Coastal Forum
PCNP	Pembrokeshire Coast National Park
PMcSAC	Pembrokeshire Marine candidate Special Area of Conservation
PMCG	Pembrokeshire Marine Code Group
POCG	Pembrokeshire Outdoor Charter Group
RIB	Rigid-hulled inflatable boat
RSPB	Royal Society for the Protection of Birds
RSPCA	Royal Society for the Prevention of Cruelty to Animals
RYA	Royal Yachting Association
SDSC	Scientific Diving Supervisory Committee
SNH	Scottish Natural Heritage
SWSFC	South Wales Sea Fisheries Committee
WAG	Welsh Assembly Government
WTSWW	Wildlife Trust South and West Wales

APPENDIX 2

SKOMER MNR SEAL WORK

Seal Pup Production Skomer MNR Mainland 2004

First sighted at	No. first sighted at location	Date last checked	Seen to moult	No. Survival assumed*
Wooltack Bay Caves	4	11-Oct		3
Martins Haven Caves	4	12-Nov		1
Jeffery's Haven	13	03-Nov	12	1
Pebbley Beach	15	03-Nov	13	
Three Doors Cave & Beach	3	03-Nov	1	2
Horseshoe Cave	0	11-Oct		
Boulder Beach & Cave	5	03-Nov	1	
Little Castle Bay	5	03-Nov	3	2
Victoria Bay	1	03-Nov		1
Rainy Rock Beach & Cave	3	03-Nov	1	1
Renny Slip & Cave	5	03-Nov	2	1
Watery Bay	1	03-Nov		1
Total	59		33	13
Number of seal pups unaccounted for	6			
Mortality assumed	1			
Still born	5			
RSPCA care	1			
	13			



J. H. Matthews. Grey Seal Breeding Census: Skomer Island 2004. Science Report no. CCW/WW/04/7

SUMMARY

176 pups were recorded as being born on Skomer Island in 2004. This includes one spring pup born outside the main period of observation (14th August – 29th November) and nine pups that qualify as ‘wanderers’. This is the highest recorded total since 1998 when 178 pups were born.

50 pups were known or assumed to have died, giving a mortality rate of 28%; higher than last year and 7% above average for the last seven years. This was probably influenced by several periods of bad weather that almost certainly caused some separation and injury within the pup population.

59% of births occurred in September. The most prolific period was week 37 (10th – 16th September) when 34 pups were born. This corresponds almost exactly with the peak seven day periods in the last two years (33 born between 15th and 21st September 2003 and 22 born between 10th and 16th September 2002).

The mean age of onset of moult ranged from 11 days on the flippers to 15 days on the body. The mean duration of moult ranged from a minimum of six days (moult on body to completion) to 10 days - from first signs of moult on flippers to completion. These figures are almost exactly the same as those for last year.

One pup was rescued by the RSPCA at Langland Bay in The Gower, over 60 miles from Skomer. Its colour marking confirmed it was born in The Lantern.

Sketches were made of 56 seals with distinctive markings. Of these, 12 were definitely re-identified from previous years, seven were probable and four possible re-sights. The adult female LBK18 was recorded for the 18th year. One seal was recorded with a satellite tracker.

Haul-out figures were similar to previous years although there were notably higher numbers of animals on the beaches in the first half of the season than have been recorded in the previous two years.

Only about six adults were recorded at peak haul-outs with monofilament line or rope netting fast around their necks. One yearling was seen with recent wounds caused by mono-filament line. One adult, one yearling, one moulter and six pups were noted with tar spots.

There were seven incidences of minor disturbance.

Several cases were noted of yearlings with bleeding mouths, the most likely cause of this being lungworm.

Skomer Marine Nature Reserve Seal disturbance study 2002 & 2003.

Lock, K. Newman, P. Burton, M. Luddington, L.

CCW Regional Report CCW/WW/04/6

SYNOPSIS

The present study aimed to record levels of seal disturbance caused by human activities during the seal pupping season at mainland sites in the Skomer MNR. Two sites were chosen on the Deer Park, these sites have excellent cliff top viewing locations and are popular with walkers watching seals

Placement students completed the survey in autumn 2002 and 2003. Cliff top observation recording was used to observe the human activities and seal behaviour close to the sites. Cliff top visitors made up 89% of the observed activities of which only 2.5% caused seals to leave the beach. Only 14 boats (fishing and tourism) were recorded, all of which were moderately noisy and caused the seals to become alert and in some cases leave the beach. Skomer MNR survey work caused adult seals to leave the beach on 4 of the 6 observations, pups all remained on the beach and were either not disturbed at all or recovered very quickly.

In 2003 the benefits of a 'Seal Watching' leaflet was investigated, the leaflet was distributed at the National Trust, Martins Haven car park and a questionnaire was used to interview visitors leaving the Deer Park after their walk. 62% of visitors knew that seals were here before coming for the walk, knowledge of the seals came from a wide variety of sources, 42% were return visitors. 76% of visitors found the leaflet useful for their walk.

Human Disturbance on Atlantic Grey Seals (Halichorus grypus) During Pupping Season at Jeffery's Haven, Skomer Marine Nature Reserve, Pembrokeshire

HND Project Report – Seal Disturbance Study 2003

Lorna Pegg

Abstract

Seal disturbance needs to be monitored as a large percentage of the world's Atlantic Grey Seal (*Halichoerus grypus*) populations are located in the UK. It is of extreme importance to conserve the habitats and to minimise disturbance levels under European and National Legislation.

This was achieved by recording human and seal observational data as well as asking questionnaires during pupping season, at time periods when a "Seal Watching around Skomer Marine Nature Reserve" Leaflet was distributed to the public, then comparing it with data when the leaflet wasn't distributed at Jeffery's Haven located on the Deer Park, Marloes Peninsula, Pembrokeshire.

With the aim to discover if the leaflet significantly reduces seal disturbance by informing the public on how to observe the seals without causing them stress, which may result in the Cows (females) deserting their pups. Also record how long it takes the seals to recover from disturbance caused by the Skomer Marine Nature Reserve staff spraying pups on the beach for identification and recording purposes, also identifying human activities that cause the most seal disturbance, and to compare results with the Seal Disturbance 2002 report.

Most visitors at Jeffery's Haven were walkers, whether leaflets were distributed or not. Although there was positive change in the public's noise and movement levels showing when it was handed out that more people were still and quiet, trying not to disturb the seals. However by using the Chi-square test it has shown that there is no significant difference in seal behaviour levels, between the two sets of data.

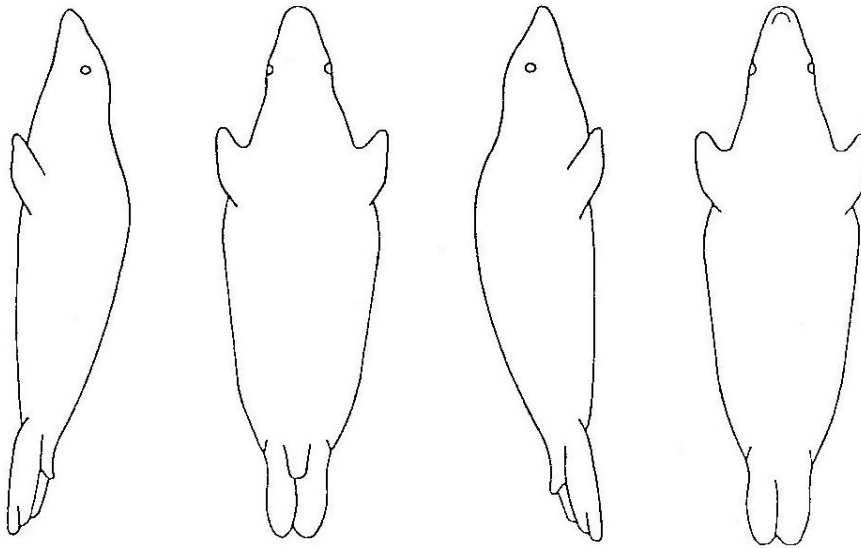
Also it was recorded that only 2 visitor observations out of the total 194, actually referred to the leaflet on the cliff top, and even though 11 visitor questionnaires showed that they didn't even read the leaflet, showing it perhaps isn't so effective statistically, but it effectively promotes the principles of interpretation, which is primarily about providing the public with information, provoking them to change their behaviour so not to cause disturbance and then finally support conservation issues.

Skomer Marine Nature Reserve Identification of Individual Seals

Seal code/number	Sex (m/f)	Size small/average/large/v.large	Recorders name

Date	Site	Pelage description & colour:		
		Dorsal:	Ventral:	Head:
Notes:		Identification mark description:		

Sketch:



Codes:

- HD** head
- NK** neck
- VNK** ventral neck
- CH** chest
- LF** left flipper
- RF** right flipper
- SH** shoulders
- BK** back
- LBK** lower back
- LS** left side

Photo Identification:



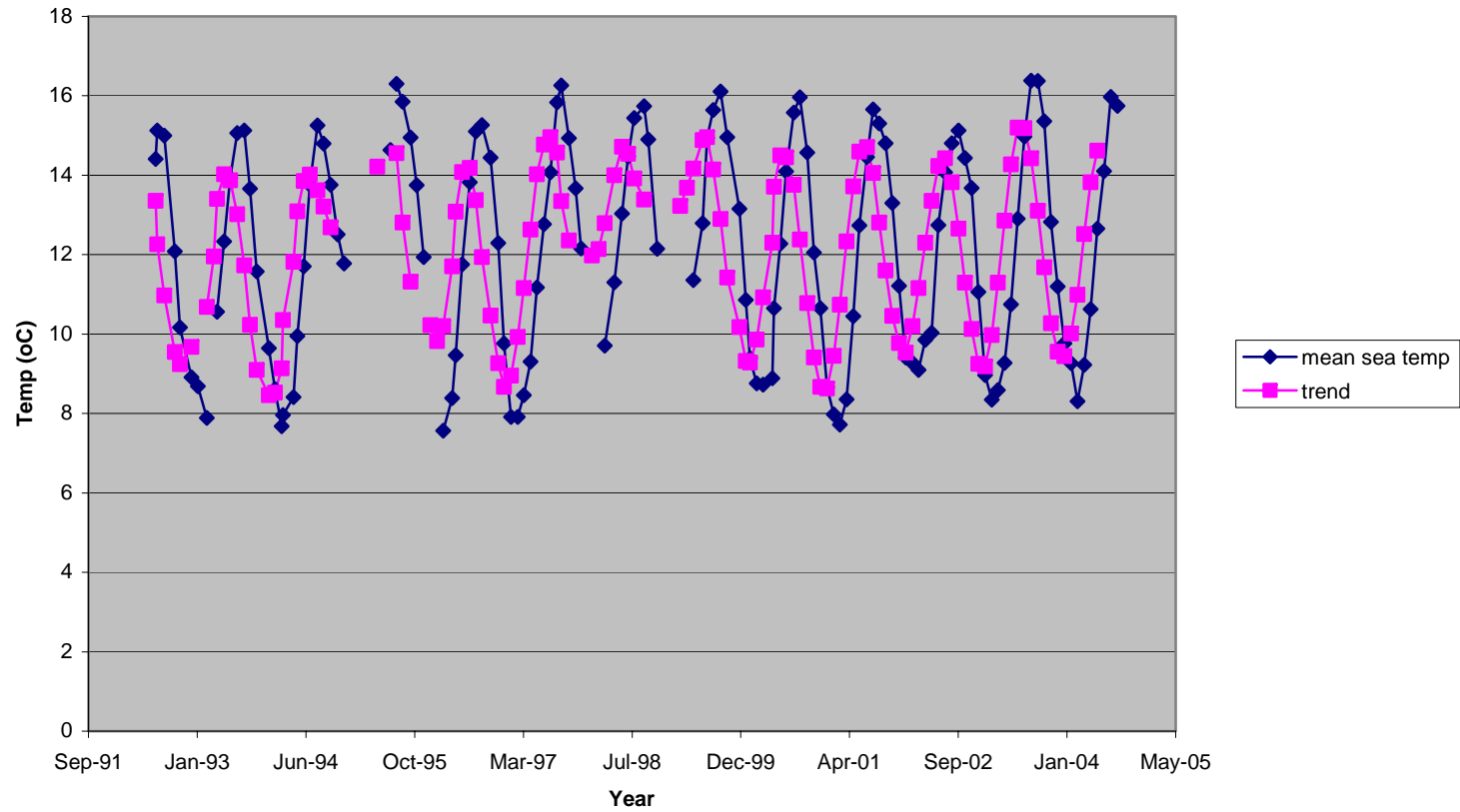
Photo explanatory sketch:



APPENDIX 3

SEABED TEMPERATURE RESULTS

(MONTHLY MEANS 1992-2004)



APPENDIX 4

SKOMER MNR SCIENCE REPORT SYNOPSES

Luddington, L.R. Newman, P. Lock, K. Burton, M. (2004) Skomer Marine Nature Reserve *Pecten maximus*, King scallop survey 2004. CCW Regional Report CCW/WW/04/2

The present survey aimed to establish the current status of *P. maximus* in Skomer MNR and was a repeat of the survey carried out in 2000 with the addition of 4 new sites. A team of 50+ volunteer divers swam transects along the seabed collecting any *P. maximus* encountered. Length, width and growth bands of each individual were measured. Each was then marked and returned to the site from which they were collected.

Total area surveyed was 10,632 m² and 1312 individuals were measured. Mean density for the whole MNR in 2004 was 0.12 m⁻², which represented a 3-fold increase since 2000. Similarly, the modal age and size class increased in 2004 compared with 2000. Both the density and modal age and size class varied between sites. Martins Haven showed a low density and paucity of individuals over 6 years old compared with other sites; Martins Haven is also a very popular site with recreational shore divers.

The width of the first year growth band showed a normal size frequency distribution similar to 2000. Comparison with other studies suggests this distribution represents a single annual spawning event.

The results suggest a continued recovery of the population since cessation of exploitation in 1990.

M. Burton, K. Lock, L. Luddington & P. Newman. (2004). Skomer Marine Nature Reserve project status report 2003/04. CCW West Area Report 29

The second project status report produced by the Skomer Marine Nature Reserve summarises the progress and status of the monitoring projects at Skomer MNR. A summary of all established projects in the MNR is provided in a table format. For each project that was worked on in the 2003 field season a more detailed account is given including a history and summary of the results so far.

Hasthorpe. J (2004) Is the Establishment of a NTZ within the Skomer MNR a potentially viable option? Under graduate dissertation, Cardiff University.

WITH MANY FISH STOCKS IN THE WATERS OF THE EUROPEAN UNION NOW CONSIDERED TO BE 'OVER-FISHED' OR 'AT RISK OF DEPLETION', THE EU COMMON FISHERIES POLICY (CFP) APPEARS TO BE FAILING IN ITS CONSERVATIONAL OBJECTIVES. IN LIGHT OF THIS, INTEREST IN THE CONCEPT OF 'NO TAKE ZONES' (NTZS) AS A MANAGEMENT TOOL FOR THE CONSERVATION/ENHANCEMENT OF FISHERIES HAS BEEN DEVELOPING. ALTHOUGH MUCH EVIDENCE FOR THE SUCCESS OF NTZS HAS BEEN SEEN ABROAD, LITTLE RESEARCH HAS BEEN CONDUCTED INTO THEIR POTENTIAL FOR UK FISHERIES TO DATE.

It is for this reason that this report investigated the potential and viability of establishing a NTZ within the Skomer Marine Nature Reserve (SMNR) situated in west Wales; an idea which is currently under discussion by the SMNR Advisory committee. Questionnaires and interviews were used as a means of gauging the opinion of MNR users and in particular the commercial fishermen whose activities would be displaced by a closure within the MNR. Additionally fisheries data from the area was analysed in order to assess the current status of the shellfish fishery and the potential benefits a closure could have.

This reports finding indicated that the establishment of a NTZ within the SMNR was a potentially viable option and that there was a good deal of support for the idea in these initial stages of discussion. However as there was limited evidence indicating that the fishery was in a state of decline and the potential fisheries benefits could not be guaranteed it is thought that any NTZ should be initially introduced on the grounds of conservation and research. Additionally a great deal of further investigation and discussion is thought necessary before NTZ status can be achieved.

APPENDIX 5**EXAMPLES OF SKOMER MNR IN THE MEDIA**

Western Telegraph August 4th 2004

PCNP Coast to Coast 2005

Diver Magazine July 2004

Western Mail 24 March 2005

Milford Mercury February 3rd 2005

Western Telegraph 9th February 2005

Western Telegraph 16th February 2005

Western Telegraph and Fishing New 4th March 2005

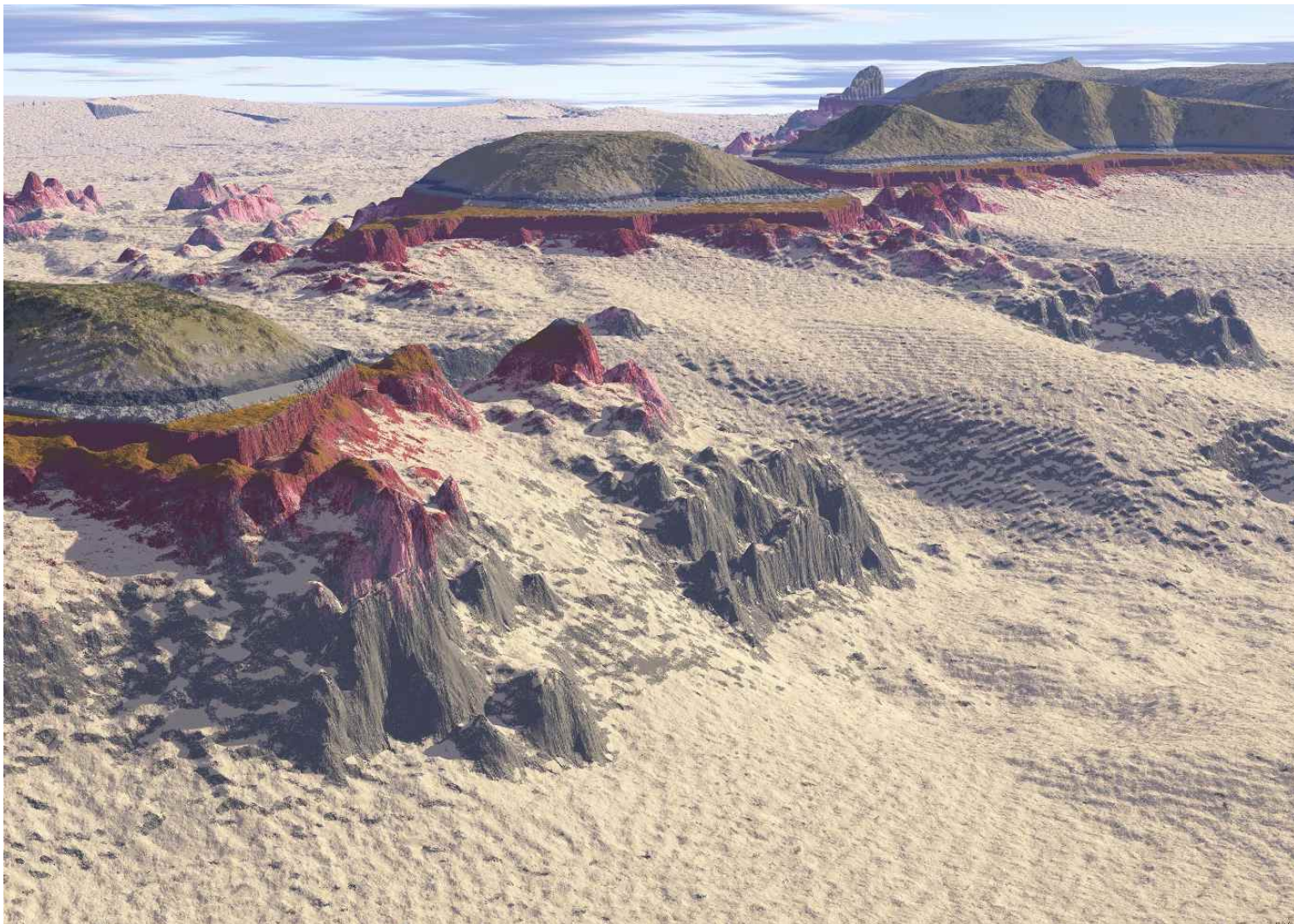
Western Telegraph 30th March 2005

APPENDIX 6

SKOMER MNR DISPLAY POSTERS

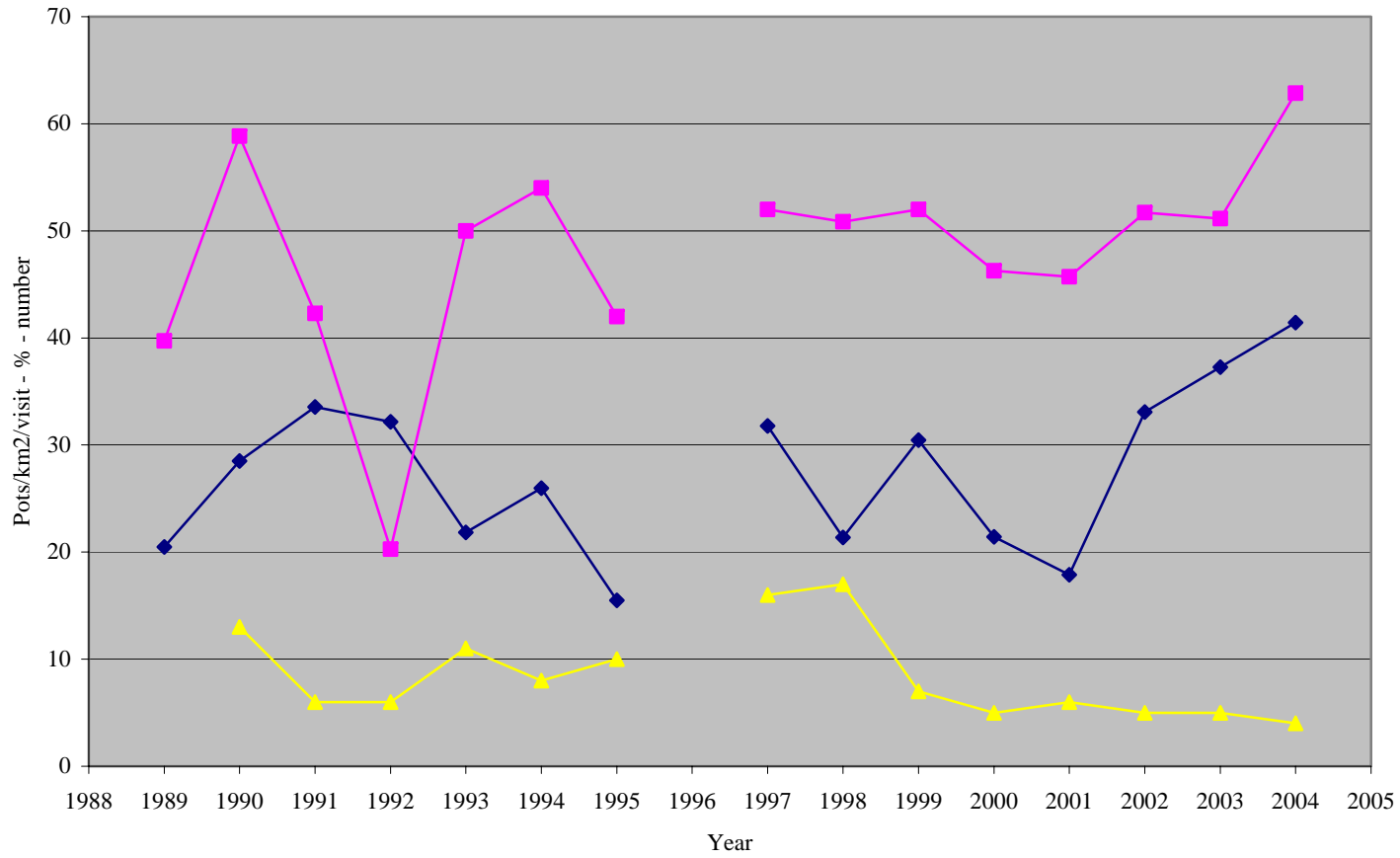
(awaiting delivery of electronic images from contractor)

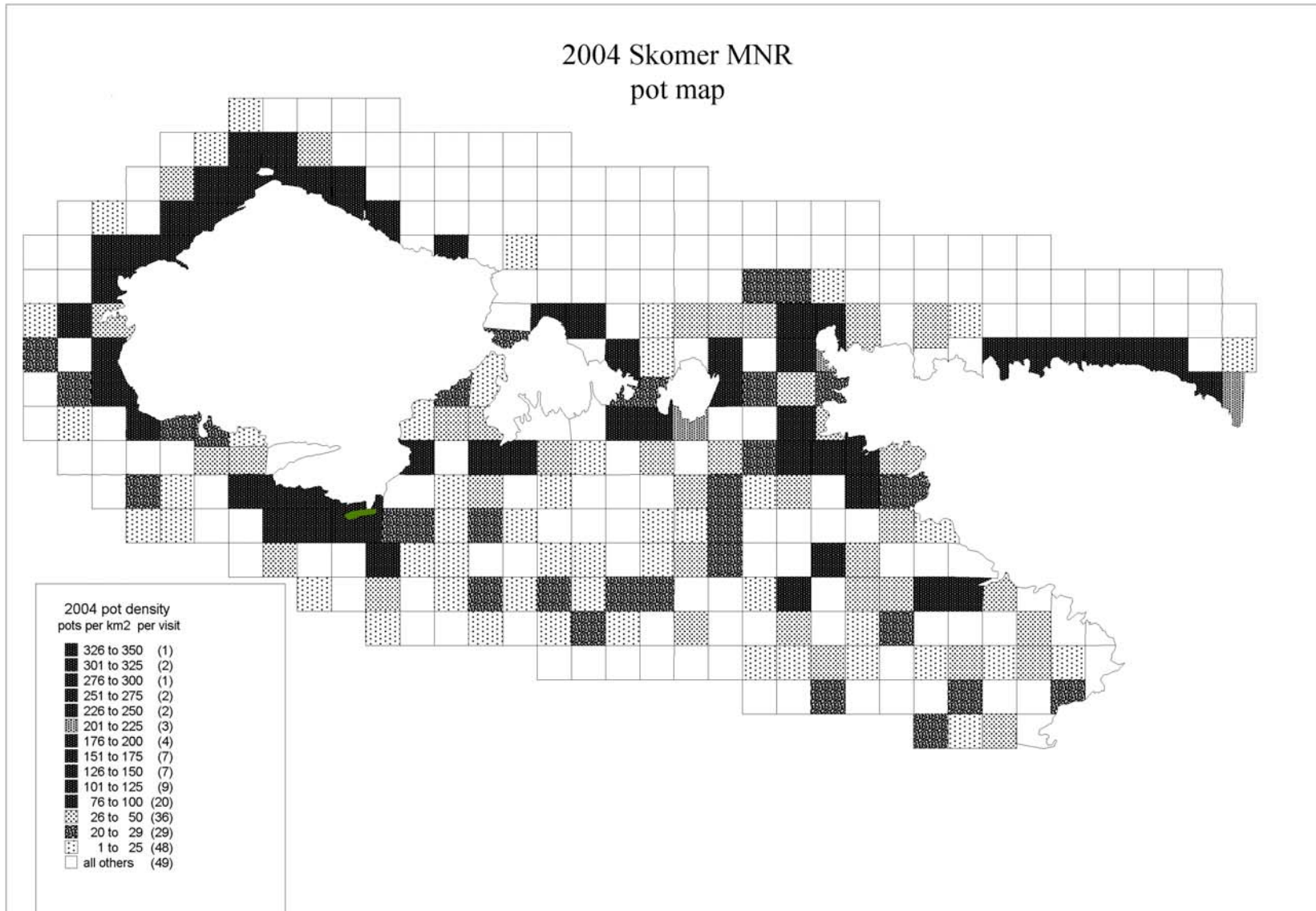
3D Multibeam image



APPENDIX 7 FISHING EFFORT IN SKOMER MNR

Summary of fishing effort in the Skomer MNR

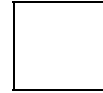




APPENDIX 8

Skomer Marine Nature Reserve Fishing restriction proposal

CONSULTATIONS 01



[Consultations Introduction](#) | [Consultations 01](#) | [Consultations 02](#) | [Consultations 03](#)

THIS IS A CONSOLIDATED VERSION OF THE BYELAW INCORPORATING THE AMENDMENTS RESOLVED UPON AT THE COMMITTEE'S MEETING ON FRIDAY 4 FEBRUARY 2005.

SKOMER MARINE NATURE RESERVE - FISHING RESTRICTIONS

1. Area of restricted fishing

No person shall, fish for, take or remove any sea fish from any part of the Skomer Marine Nature Reserve; being that area of the sea lying within the northern point of Gateholm Island due North to the mainland; from the southern point of Gateholm Island a straight line in a direction of 278o(T) to a position 2.75 cables due south (T) of the western extremity of the Mew Stone thence 2.75 cables off the mainland shore of Skomer around the west coast of the Island to a position 2 cables due north (T) of the Garland Stone, thence a straight line in a direction of 098o (T) to a position 51o44.5'N,05o13'W, thence due south (T) to the mainland coast, **except that:**

a) In that area lying to the east of a line drawn from the Reserve boundary at 51o 44.42N, 05o 15.175'W thence in a southerly direction to Tusker rock at 51o 44.175N, 5o 15.175W and thence in an easterly direction to the mainland at 51o 44.176N, 5o 15.99W fishing using only hook and line shall be allowed.

b) The use of pots or creels shall be allowed throughout the Skomer Marine Nature Reserve (save Sec 2.1(d) experimental zones) from or in conjunction with a vessel the owner of which is a 'historical user' being a person who has met the qualification conditions set out in Section 3.2 and whose name and circumstances have been entered onto a register, to whom an annual permit will be issued subject to the conditions below. Such persons shall continue to have an authority to fish pots or creels throughout the Skomer Marine Nature Reserve (save experimental zones) for as long as the most recent vessel upon which their record is based continues within the same ownership and any replacement vessel remains in the same ownership and has an overall length and capacity no greater than that of the vessel replaced. In the event that a prior enforceable commitment existed to change a vessel during the final year on which their record is based, this vessel shall be used to determine overall length and capacity and ownership.

2. Permits

2.1 Annual permits will be issued to a historical user upon demand subject to the following conditions:-

a) The holder shall submit catch and effort returns for all sea fish caught within the Skomer Marine Nature Reserve Area.

b) The holder shall be entitled to fish up to, but not exceeding, the average annual maximum number of pots or creels fished during the five years of the qualifying period by their vessel. This shall be recorded in the register and permit referred to in Section 1(b), and shall be subject to an annual reduction of 5% per annum of that initial limit to a minimum of 50% of that initial limit or 50 pots, whichever is the highest.

c) The holder shall also be required, at the sole discretion of the South Wales Sea Fisheries Committee, to use a specified tag on each pot or creel at all times that it is deployed within the Skomer Marine Nature Reserve Area. No other pot or creel shall be carried in a readily deployable state within the area prescribed in Section 1.

d) The holder shall not be authorized to fish certain areas of which he/she shall be given 3 months prior notice as may from time to time be marked by the Countryside Council for Wales as experimental zones, the extent of which shall not exceed 10% of the area of the Skomer Marine Nature Reserve as a whole.

2.2 Annual permits will not be issued to a historic user if they fail to meet the permit qualifications set out in Section 1, or if they cease to fish in the Marine Nature Reserve Area for a period of 2 or more calendar years.

2.3 No permits will be issued after 10 years following the date of confirmation of this byelaw

2.3 No permits will be issued after 10 years following the date of confirmation of this byelaw.

3. Definitions

3.1 In Section 1(b) above relating to any historical user, the term 'fish for' shall include the carriage within the prescribed area of any fishing instruments not otherwise authorised under the provisions of this byelaw and which are in a readily deployable state. In the case of pots or traps this shall include the containment of bait of any description.

3.2 A 'historical user' shall be the owner of any vessel who, based on activity information collected by the South Wales Sea Fisheries Committee and/or Countryside Council for Wales, has a record of having regularly fished pots or creels within the Skomer Marine Nature Reserve area in four of the last five calendar years (2000-2004 inclusive).

3.3 'Vessel capacity' shall be defined by the formula - Overall length (in metres) x breadth (in metres) + (total engine power in kilowatts x 0.45).

3.4 'ownership' shall mean the person or persons named in the ownership and share holding schedule entered upon the Register of British Fishing Vessels for the purpose of the Merchant Shipping Act 1995 for the vessel concerned or any successor Act.

4. Revocation

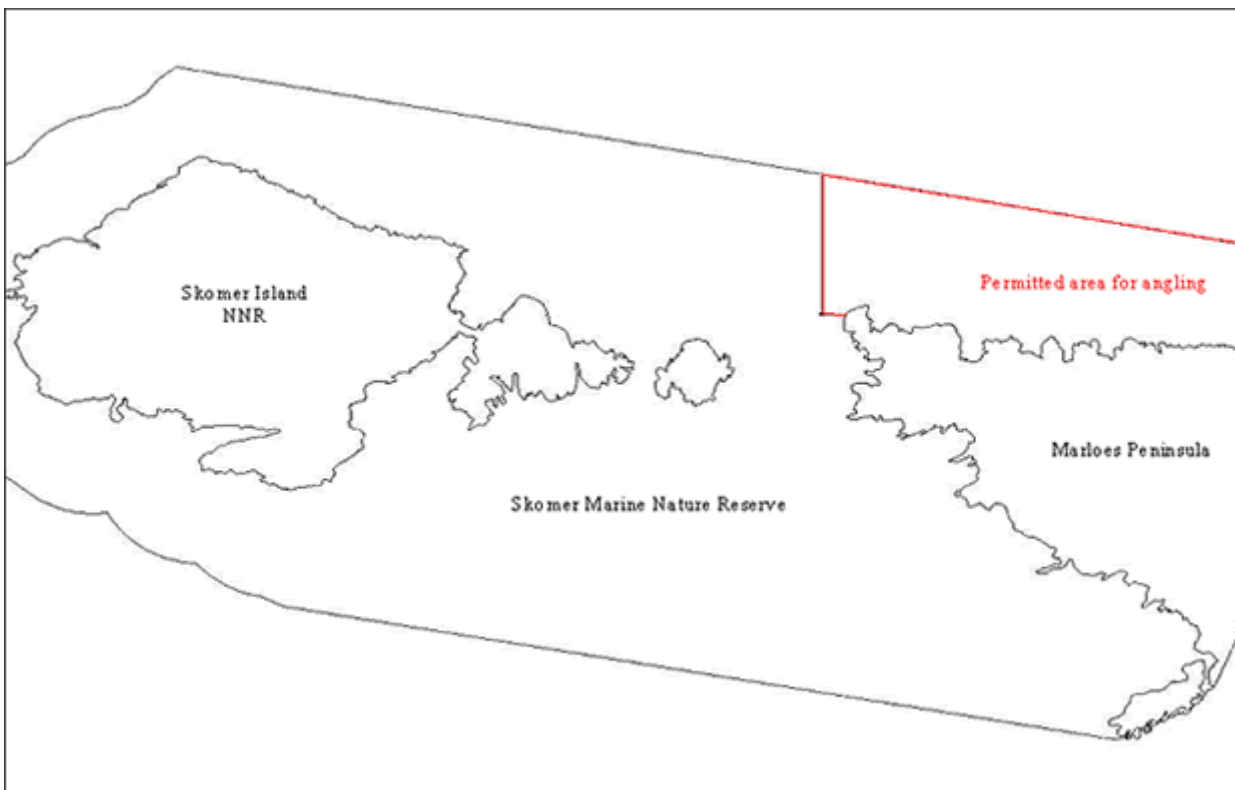
Existing South Wales Sea Fisheries Committee byelaws 'Prohibited Area for use of dredges and beam trawls - Skomer' and 'Prohibited area for scallop fishing - Skomer' confirmed by the Secretary of State for Wales on the 4th December 1997 are hereby revoked.

Yours faithfully

P J COATES

Director

Map is for illustration only and does not form part of the byelaw



APPENDIX 9 Scallop Poster

DIVERS

ONE OF THESE



COULD COST YOU

£5000

**AND THE SEIZURE OF YOUR DIVING GEAR
IF TAKEN FROM SKOMER MARINE NATURE
RESERVE**

OR OUT OF SEASON OR UNDERSIZE

PLEASE READ THE BYELAW

CONTACT SKOMER MNR (01646 636736)

OR

SOUTH WALES SEA FISHERIES COMMITTEE (01792 654466) FOR DETAILS

OR SEE WWW.SWSFC.ORG.UK

APPENDIX 10

Pembrokeshire BAP Partnership Autumn 2004 Newsletter

Skomer Marine Nature Reserve

Monitoring Programme 2004

Pink Sea fan, *Eunicella verrucosa*

Photographic monitoring and condition recording of the pink sea fan *Eunicella verrucosa* has been completed at all 9 sites in the established programme.

A total of 102 sea fans were recorded. Both sides of the sea fan are photographed and each fan is visually inspected for damage, fouling by animals living on the surface of the sea fan entanglement with man-made materials, necrosis (loss of living tissue) and the sea slug *Tritonia nilsodhneri* and the snail *Simnia patula*. Both these species were recorded on sea fans at two of the sites; this is the first time that they have been recorded on sea fans in the Skomer MNR since 1993.

The sea fan images will be scanned into Mapinfo to allow a visual, yearly comparison of colonies.



Sea slug, *Tritonia nilsodhneri* photographed on Pink Sea Fan.
© Mark Burton

The Skomer MNR has also supported research work on the biology of sea fans. Clippings of Skomer sea fans have been provided to Reef Research, who are conducting a study into the Genetic variation on populations of *E. verrucosa*.



Small Cushion Star, *Asterina phylactica* has been recorded and photographed at two sub-littoral sites: Mewstone and Wick basin.
© Kate Lock

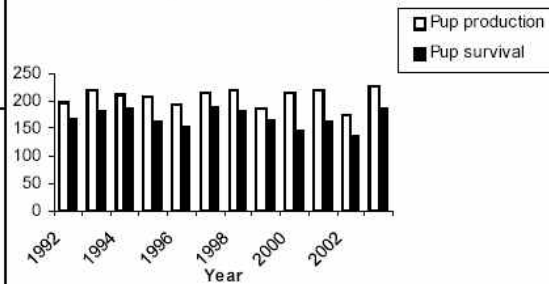
Atlantic Grey Seals, *Halichoerus grypus*

The first pup to be born in the Skomer MNR was in May on North Haven beach! Although over the years there are records of 'out of season' pups in almost every month, the seal season usually starts near the end of August and continues through to November. Regular recording at Skomer sites began in 1974 and surveys have been completed annually since 1983. From 1992 onwards a standard protocol has been adopted to record the pupping success on both the island and mainland.



Atlantic Grey Seal pup, Skomer MNR © Phil Newman

Skomer MNR (mainland + island) 1992 - 2003



In addition to the seal pupping survey, the seal disturbance study at mainland sites will be continued in Sept/Oct 2004 and a 'Seal watching leaflet' will be produced and distributed at the National Trust car park at Martins Haven. The leaflet includes information about how to behave whilst watching seals.

See the events programme in this newsletter for details of the guided seal walks this autumn.

